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REPORT ON THE ANALYSIS OF THE QUALITY ASSURANCE AND QUALITY CONTROL DATA FOR THE MISA PULP AND PAPER SECTOR

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Ontario Ministry of the Environment

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MUNICIPAL - INDUSTRIAL STRATEGY FOR ABATEMENT

(MISA)

REPORT ON THE ANALYSIS OF THE QUALITY ASSURANCE AND QUALITY CONTROL DATA FOR THE MISA PULP AND PAPER SECTOR

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ABSTRACT

There are twenty-seven pulp and paper mills located in the Province of Ontario that discharge effluent directly to surface watercourses. In 1990, these mills conducted one year of effluent monitoring under Ontario Regulation 695/88 as amended to Ontario Regulation 533/89 and Ontario Regulation 435/89 as amended to Ontario Regulation 202/90 for the MISA (Municipal/Industrial Strategy for Abatement) program. To assess the quality of the effluent monitoring data, pulp and paper mills were required to submit quality assurance and quality control (QA/QC) data. The QA/QC data assessment process evaluated the suitability of the effluent monitoring data for use in the effluent limit setting process.

The QA/QC data assessment process used in evaluating the effluent monitoring data for the MISA Pulp and Paper Sector was based on the approach outlined in the draft MISA Issues Resolution Process -- Issue Resolution Committee Reports (Ontario Ministry of the Environment, 1990). Based on the QA/QC data assessment, the following parameters have been removed from further consideration in the development of effluent limits for the MISA Pulp and Paper Sector:

Subcategory	Parameter
Sulphate (Kraft)	Molybdenum
	Thallium
	Vanadium
	1,2-Dichloroethane
	Methylene chloride
	Benzo(k)fluoranthene
	Benzo(g,h,i)perylene
	Dibenz(a,h)anthracene
	2,3,5-Trichlorophenol
	1,2,3,4-Tetrachlorobenzene
	1,2,3,5-Tetrachlorobenzene
	1,2,3-Trichlorobenzene
	1,2,4,5-Tetrachlorobenzene
	Hexachlorobenzene
	Hexachlorobutadiene
	Hexachlorocyclopentadiene
	Hexachloroethane
	Octachlorostyrene
	Pentachlorobenzene
	Total H7CDF

Subcategory	Parameter
Sulphite/ Mechanical	1,2-Dichloroethane Bromodichloromethane Methylene chloride Benzo(k)fluoranthene Benzo(g,h,i)perylene Dibenz(a,h)anthracene 1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene 2,4,5-Trichlorotoluene Pentachlorobenzene
Corrugating	Vanadium
Deinking	1,2-Dichloroethane Methylene chloride Hexachlorocyclopentadiene Total H6CDF

The QA/QC data assessment has confirmed that the majority of the effluent monitoring data for the MISA Pulp and Paper Sector is of reliable quality and is satisfactory for use in the development of effluent limits.

INTRODUCTION

The Municipal/Industrial Strategy for Abatement (MISA) program is a regulatory program with the ultimate goal of virtual elimination of persistent toxic contaminants from all discharges to Ontario waterways.

MISA Effluent Monitoring Regulations have been promulgated for nine industrial sectors, including Pulp and Paper. The Effluent Monitoring Regulations required direct dischargers to monitor the types, concentrations and total amounts of contaminants present in their effluent for a period of twelve consecutive months.

This report is an assessment of the quality assurance/quality control (QA/QC) data for the MISA Pulp and Paper Sector. The QA/QC assessment process was used to evaluate the suitability of the effluent monitoring data for use in the effluent limit setting process.

I. BACKGROUND

There are twenty-seven pulp and paper mills located in the Province of Ontario that discharge effluent directly to surface watercourses. These mills have completed one year of effluent monitoring under the MISA (Municipal/Industrial Strategy for Abatement) program.

An Effluent Monitoring Regulation for the MISA Pulp and Paper Sector was promulgated on July 21, 1989. Under the Regulation, each pulp and paper mill was required to monitor its effluent for a one year period starting on January 1, 1990 and ending December 31, 1990.

For the purposes of the Effluent Monitoring Regulation, the twenty-seven pulp and paper mills were divided into four subcategories: Sulphate (Kraft), Sulphite/Mechanical, Corrugating and Deinking/Board/Fine Papers/Tissue (see Appendix A).

There are nine mills in the Sulphate (Kraft) Subcategory, eight mills in the Sulphite/Mechanical Subcategory, two mills in the Corrugating Subcategory and the remaining mills are in the Deinking/Board/Fine Papers/Tissue Subcategory. Pulp and paper mills were placed into a particular subcategory based on the manufacturing processes used at the mill.

Note:

The Development Document for the Effluent Monitoring Regulation for the MISA Pulp and Paper Sector (Ontario Ministry of the Environment, July 1989) outlines the technical rationale behind the development of the MISA Pulp and Paper Sector Effluent Monitoring Regulation. The Development Document provides background information on the MISA Pulp and Paper Sector and outlines the technical rationale used in the selection of the parameters to be monitored and their frequency of monitoring.

The process effluent monitoring data for the MISA Pulp and Paper Sector have been published in two reports, The Preliminary Report on the First Six Months of Process Effluent Monitoring in the MISA Pulp and Paper Sector (Ontario Ministry of the Environment, February 1991) and The Preliminary Report on the Second Six Months of Process Effluent Monitoring in the MISA Pulp and Paper Sector (Ontario Ministry of the Environment, September 1991).

II. PRESENT STATUS OF THE EFFLUENT MONITORING DATABASE

The MISA Pulp and Paper Sector completed its twelfth and final month of effluent monitoring under the Effluent Monitoring Regulation on December 31, 1990. Data validation has been completed for the entire twelve months of effluent monitoring data. The data provided in this report reflects the Ministry database as of May 31, 1991.

III. IMPORTANCE OF THE QA/QC ANALYSIS

To assess the quality of the effluent monitoring data submitted under the Effluent Monitoring Regulation, pulp and paper mills were required to submit quality assurance and quality control (QA/QC) data. The QA/QC assessment process evaluated the suitability of the effluent monitoring data for use in the limit setting process.

The QA/QC data consisted of field QA/QC data submitted by each mill and internal laboratory QA/QC data kept on file at each laboratory that performed sample analysis. Field QA/QC data included the results of travelling blanks, travelling spiked blanks, duplicates and uncorrected effluent monitoring samples for specified analytes, collected at specified locations and at specified frequencies.[1] The laboratory QA/QC data consisted of the results of certain laboratory QA/QC checks (blanks, spiked blanks and replicate analyses) that were retained by the laboratories for possible audit/review by the Ministry.

The importance of the collection and assessment of QA/QC data is three-fold:

1. It serves to identify and assess the significance of:
    - biases
    - chronic contamination
    - data variability
    - false results (either positive or negative)
    - field sampling or laboratory analytical problems.

2. It is one of the processes necessary to determine the validity of the data reported in the Effluent Monitoring database.

3. It evaluates the comparability of the data submitted by different laboratories and plants.

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[1] See Glossary for definitions of the different types of QA/QC samples.

IV. THE QA/QC ASSESSMENT PROCESS

The QA/QC assessment process used in evaluating the effluent monitoring data for the pulp and paper sector followed the approach outlined in the draft MISA Issues Resolution Process -- Issue Resolution Committee Reports (Ontario Ministry of the Environment, 1990). The approach consists of three main steps, each of which is described briefly below:

Step 1. The retrieval and screening of all the field QA/QC data (travelling blanks, travelling spiked blanks, duplicates, and corrected and uncorrected effluent monitoring data) for a particular mill, and all the corresponding effluent monitoring data for each process effluent stream at the mill.

Step 2. The sorting and summarizing of the QA/QC and effluent monitoring data.

Step 3. The evaluation of the QA/QC and effluent monitoring data based on the procedures outlined in the draft MISA Issues Resolution Process -- Issue Resolution Committee Reports (Ontario Ministry of the Environment, 1990).

In the evaluation of the QA/QC data, emphasis was placed on those parameters identified as candidates for limit-setting. In order to determine these candidate parameters, the process effluent data contained in the effluent monitoring database were analyzed to determine those parameters which would be selected according to the following selection criteria:

> In selecting candidate parameters for each mill during the Pulp and Paper Sector limit setting process, a parameter was deleted from the data set for selection if the monitoring data showed (at a 95% confidence level) that a statistical proportion of 0.9 of the data was at a concentration of less than the Regulation Method Detection Level (RMDL).
>
> For each mill subcategory a parameter was designated as a candidate parameter for that subcategory if the parameter was a candidate parameter for one or more mills in the subcategory.

Based on the selection criteria and before the QA/QC data assessment, 77 parameters were identified as potential candidates for limit setting for the Sulphate (Kraft) Subcategory, 43 for the Sulphite/Mechanical Subcategory, 38 for the Corrugating Subcategory and 49 for the Deinking/Board/Fine Papers/Tissue Subcategory. The parameter pH was not included in the candidate parameter analysis since it will be regulated within the range specified in the Effluent Limits Regulation. It was not necessary for the mills to submit QA/QC data for specific conductance.

Tables 1 to 4 in Appendix D list the potential candidate parameters identified prior to the QA/QC data assessment and indicate, for each mill, the process effluent stream in which the parameters were identified (see Appendix A for mill numbering system). Primary emphasis was placed on the evaluation of the QA/QC data for these potential candidate parameters. Non-candidate parameters were investigated for possible false negative results by examining the recovery levels of the travelling spiked blanks to check for under-recoveries.

All analytical results with remark codes ">", "A", "<DL", "<T" and "<W", and analytical results without a remark code were included in the QA/QC analysis (see Appendix B for list of remark codes used by the MISA Pulp and Paper Sector). All data with remark codes different than the ones mentioned above were excluded because the results are questionable (approximately 4.5% of the database).

Data with analytical results below the RMDL were used as reported unless the value was less than or equal to RMDL/10 (see Appendix C for list of RMDL's). In this case, the value of RMDL/10 was substituted, as per the criteria defined in the draft MISA Issues Resolution Process -- Issue Resolution Committee Reports (Ontario Ministry of the Environment, 1990). It should be noted that when a parameter level is reported as less than a detection limit (i.e. remark code "<DL") the actual level in the effluent is generally within the range between zero and the detection limit.

STEP ONE: RETRIEVAL AND SCREENING

Appendices F to K contain tables summarizing the effluent monitoring data and the accompanying field QA/QC data on a mill by mill basis. The information presented in these tables represents the first step in the QA/QC Assessment, namely, the retrieval and screening of the data. Each of these six appendices presents information about a particular group of data. These tables are listed below.

Appendix	Tables	Description
F	1.1 - 1.27	Concentration ratios for frequently monitored candidate parameters.[2]
G	2.1 - 2.27	Concentration ratios for infrequently monitored candidate parameters.[3]
H	3.1 - 3.27	Detection Frequencies and Concentration Ratios for Candidate Parameters in Process Effluent Travelling Blanks
I	4.1 - 4.27	Range of Recoveries and Ratio of Spiked Quantity to Regulation Method Detection Limit for Candidate Parameters in Process Effluent
J	5.1 - 5.27	Absolute Value of the Difference Between Process Effluent Concentration and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for Candidate Parameters in Process Effluent

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[2] Frequently monitored parameters are those parameters monitored daily and thrice-weekly.

[3] Infrequently monitored parameters are those parameters monitored weekly, monthly, bi-monthly and semi-annually.

K	6.1 - 6.27	Absolute Value of the Average Difference Between Process Effluent and Uncorrected Sample Concentration Divided by the Regulation Method Detection Limit for Candidate Parameters in Process Effluent

STEP TWO: SORTING AND SUMMARIZING

After summarizing the effluent monitoring data and QA/QC data, the second step in the QA/QC Assessment was to classify individual parameters according to their frequency of occurrence and their level observed in each process effluent stream.

Classification of parameters according to their frequency of occurrence dictates the strategy which is to be followed for interpreting the QA/QC data. The draft MISA Issues Resolution Process -- Issue Resolution Committee Reports (Ontario Ministry of the Environment, 1990) presents three strategies for use in evaluating QA/QC data. These strategies provided guidance during the systematic evaluation of specific QA/QC data.

The three strategies are summarized below:

Strategy 1: **Evaluation of "Frequently Found" Analytes**

Assess the likelihood of over-estimation or under-estimation based on the recovery of travelling spiked blanks. Assess the possibility of error in blank corrections. Assess precision using field duplicates and, if necessary, assess precision using laboratory replicates.

Strategy 2: **Evaluation of "Infrequently Found" Analytes**

Determine the possibility of false negative conclusions based on the possible under-recovery of travelling spiked blanks. Determine the possibility of false positive conclusions based on possible chronic positive travelling blanks. If necessary, determine the possibility of under-correction or over-correction for laboratory blanks.

Strategy 3: **Evaluation of "Never Found" Analytes**

Determine the possibility of false negative conclusions based on the possible under-recovery of travelling spiked blanks. If necessary, determine the possibility of over-correction for laboratory blanks.

The following three main categories were used for sorting according to the strategies identified above:

- Frequent Occurrence
- Infrequent Occurrence
- Non-occurrence

It should be noted that the names of the categories are subjective terms and were used only for the purpose of identifying the categories in the QA/QC data review exercise.

In determining the sorting criteria for each category listed above, it was necessary to identify a frequency of detection where very few parameters, if any, would be classified as occurring both frequently and infrequently. Therefore, the effluent monitoring data were sorted in order of decreasing frequency of occurrence and it was determined that a sorting criteria of 40% frequency of detection would meet this objective. Thus, the following classifications were developed:

FREQUENT OCCURRENCE:	Greater than 40% of the parameter's observations are above the RMDL.
INFREQUENT OCCURRENCE:	For frequently monitored parameters, between 1% and 40% of the parameter's observations are above the RMDL. For infrequently monitored parameters, between 11% and 40% of the parameter's observations are above the RMDL.
NON-OCCURRENCE:	For frequently monitored parameters, less than 1% of the parameter's observations are above the RMDL. For less frequently monitored parameters, less than 11% of the parameter's observations are above the RMDL.

Within both the Frequent and the Infrequent Occurrence categories it was necessary to further classify the parameters according to the levels at which they were observed. Three sub-categories were used for this further classification:

- High Level - Used to describe quantitative data.
- Medium Level - Used to describe semi-quantitative data.
- Low Level - Used to describe qualitative data.

The following criteria for these classifications were then developed:

Frequent Occurrence:

HIGH LEVEL: Greater than 50% of the parameter's observations are above 5 times the RMDL.

MEDIUM LEVEL: Greater than 50% of the parameter's observations are above 2 times the RMDL.

LOW LEVEL: Greater than 40% of the parameter's observations are above the RMDL.

Infrequent Occurrence:

HIGH LEVEL: Of those observations greater than 2 times the RMDL, more than 50% are higher than 5 times the RMDL.

MEDIUM LEVEL: Of those observations greater than the RMDL, more than 50% are higher than 2 times the RMDL.

LOW LEVEL: Observations do not fit the criteria listed for infrequent occurrence at either the high or medium level.

The following summary can, therefore, be written:

Frequent Occurrence - High Level

Greater than 50% of the parameter's observations are greater than 5 times the RMDL.

Frequent Occurrence - Medium Level

Greater than 50% of the parameter's observations are greater than twice the RMDL.

Frequent Occurrence - Low Level

Greater than 40% of the parameter's observations are above the RMDL.

Infrequent Occurrence - High Level

For frequently monitored parameters, between 1% and 40% of the observations are above the RMDL, and of those observations greater than 2 times the RMDL, more than 50% are higher than 5 times the RMDL.

For infrequently monitored parameters, between 11% and 40% of the observations are above the RMDL, and of those observations greater than 2 times the RMDL, more than 50% are higher than 5 times the RMDL.

Infrequent Occurrence - Medium Level

For frequently monitored parameters, between 1% and 40% of the observations are above the RMDL, and of those observations higher than the RMDL, more than 50% are higher than 2 times the RMDL.

For infrequently monitored parameters, between 11% and 40% of the observations are above the RMDL, and of those observations higher than the RMDL, more than 50% are higher than 2 times the RMDL.

Infrequent Occurrence - Low Level

Observations do not fit the criteria listed for infrequent occurrence at either the high or medium level.

Non-occurrence

For frequently monitored parameters, less than 1% of the parameter's observations are above the RMDL.

For infrequently monitored parameters, less than 11% of the parameter's observations are above the RMDL.

In order to classify the effluent monitoring data according to the above-noted categories, the average reported result was calculated for each parameter for each mill, and this average was divided by the RMDL for the parameter. This value is defined as the parameter's "concentration ratio" and this ratio enables the comparison of data for different parameters. A concentration ratio of 1.0 would indicate that the reported result for that parameter was equal to the Regulation Method Detection Limit.

The results of this classification are summarized in Appendices L and M:

Appendix	Tables	Description
L	7.1 - 7.4	Average Process Effluent Concentration Ratios for Candidate Parameters Monitored Daily or Thrice-weekly by Subcategory
M	8.1 - 8.4	Average Process Effluent Concentration Ratios for Candidate Parameters Monitored Weekly, Monthly, Bi-Monthly or Semi-Annually by Subcategory

Application of the strategies described above required evaluation of the travelling spiked blank results in Appendix I, travelling blank results and duplicate sample results. The travelling blank and duplicate sample results are summarized in Appendices N and O:

Appendix	Tables	Description
N	9.1 - 9.4	Average Process Effluent Travelling Blank Concentration Divided by the Regulation Method Detection Limit by Subcategory
O	10.1 - 10.4	Absolute Value of the Average Difference Between Process Effluent Concentration and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit by Subcategory

During the evaluation of the travelling spiked blank data in Appendix I average recoveries of greater than 40% were deemed satisfactory, whereas average recoveries lower than 40% were of concern. Recoveries that are lower than 40% increase the risk of a false negative conclusion as to the presence or absence of a parameter.

Very high recoveries that are greater than 140% can only be attributed to either data entry errors or field/laboratory contamination. If an over-recovery were due to field contamination, the contamination would also be present in the blank samples and would be identified through the evaluation of travelling blanks.

In assessing the travelling blank data in Appendix N average travelling blank reported results divided by their RMDLs which were consistently less than 1.0 often indicated that the effluent monitoring data for that parameter were satisfactory.

The information presented in Tables 10.1 to 10.4 in Appendix O indicated the precision with which field duplicates could be reproduced; specifically, the lower the ratio, the more precisely results could be expected to be duplicated.

STEP THREE: EVALUATION OF QA/QC DATA

CANDIDATE PARAMETERS FOR LIMIT SETTING:

The parameters identified as candidate parameters for limit setting were aggregated into two major categories -- Conventional and Non-Conventional Parameters, and Priority Pollutants. The QA/QC data for these candidate parameters were evaluated as follows, based on the classification of each parameter:

Frequent Occurrence - High Level

Accuracy, recovery, and precision were investigated.

Frequent Occurrence - Medium Level

Recovery, precision and potential for blank biases were investigated.

Frequent Occurrence - Low Level

Recovery and potential for false positives were investigated.

Infrequent Occurrence - High Level

Process changes and potential for contamination were investigated.

Infrequent Occurrence - Medium Level

Recovery and potential for blank biases were investigated.

Infrequent Occurrence - Low Level

The potential for false positives or false negatives was investigated.

Non-occurrence

The potential for false negatives or excessive blank corrections was investigated.

During the analysis of the QA/QC data consideration was also given to the following:

1. Unique parameters (i.e. candidate parameters for one mill only) which could be due to:

    - anomalies in mill process operation
    - special chemicals used at the mill site
    - the possibility of field contamination
    - the possibility of lab contamination.

2. Parameters that are candidates for a limited number of mills. These could be due to:

    - use of the same contract laboratory
    - the possibility of lab contamination
    - similar processes or chemicals used.

3. Candidate parameters found infrequently at an extremely high level. These could be due to:

    - the possibility of detection resulting from process change or process upset.

4. Candidate parameters with non-compliance Method Detection Limits (MDL). A parameter may be a candidate solely because its MDL is greater than the RMDL.

    Where the MDL is greater than 1.6 times the RMDL, it is not possible to confirm the presence or absence of the parameter. The presence or absence of such parameters will be confirmed by further effluent characterizations.

5. Reports from Ministry audits of plants and contract laboratories.

6. Data from other sources, such as pre-regulation effluent monitoring and interlaboratory studies.

NON-CANDIDATE PARAMETERS:

The recovery levels of the travelling spiked blanks for parameters not identified as candidate parameters for limit setting were investigated. In general the recoveries fell within the acceptable range of 40% to 140%. There were a few scattered under-recoveries for some parameters but these were for one mill in a particular subcategory. It was concluded that the lists of potential candidate parameters for limit setting presented in Appendix D are complete.

V. SPECIFIC PARAMETER QA/QC DATA ASSESSMENT

The QA/QC data assessment was performed on the data for the potential candidate parameters listed in Tables 1 to 4 in Appendix D.

a) Conventional and Non-Conventional Parameters

Of the conventional and non-conventional parameters assessed, all nine were found to be present in process effluent discharges from almost all of the Ontario pulp and paper mills. These nine parameters are: COD, ammonia plus ammonium, total Kjeldahl nitrogen, nitrate + nitrite, DOC, total phosphorus, total suspended solids, VSS, and BOD5.

These parameters were all frequently found at levels well above their respective RMDLs. Evaluation of the QA/QC data associated with the conventional and non-conventional parameters for which QA/QC data assessment was performed confirmed their presence at the levels observed.

b) Priority Pollutants

All priority pollutants that were identified as potential candidates for limit setting were evaluated in terms of QA/QC. A brief summary of the QA/QC data assessment, along with the general conclusion about the quality of the effluent monitoring data for each parameter is presented in Appendix E. For each subcategory, the parameters are presented in order of increasing analytical test group.

VI. **RESULTS**

Based on the QA/QC data assessment the following parameters have been removed from the initial lists of potential candidate parameters:

SUBCATEGORY	ATG	PARAMETER
Sulphate (Kraft)	9	Molybdenum
		Thallium
		Vanadium
	16	1,2-Dichloroethane
		Methylene chloride
	19	Benzo(k)fluoranthene
		Benzo(g,h,i)perylene
		Dibenz(a,h)anthracene
	20	2,3,5-Trichlorophenol
	23	1,2,3,4-Tetrachlorobenzene
		1,2,3,5-Tetrachlorobenzene
		1,2,3-Trichlorobenzene
		1,2,4,5-Tetrachlorobenzene
		Hexachlorobenzene
		Hexachlorobutadiene
		Hexachlorocyclopentadiene
		Hexachloroethane
		Octachlorostyrene
		Pentachlorobenzene
	24	Total H7CDF
Sulphite/ Mechanical	16	1,2-Dichloroethane
		Bromodichloromethane
		Methylene chloride
	19	Benzo(k)fluoranthene
		Benzo(g,h,i)perylene
		Dibenz(a,h)anthracene
	23	1,2,3-Trichlorobenzene
		1,2,4-Trichlorobenzene
		2,4,5-Trichlorotoluene
		Pentachlorobenzene
Corrugating	9	Vanadium
Deinking	16	1,2-Dichloroethane
		Methylene chloride
	23	Hexachlorocyclopentadiene
	24	Total H6CDF

VII. CONCLUSIONS

As a result of the QA/QC data assessment, the lists of potential candidate parameters in Appendix D have been revised to reflect those parameters that have been removed from further consideration in the limit setting process and to identify the quality of the effluent monitoring data for the remaining parameters. Tables 5 to 8 on pages 17 to 21 of this report present the final lists of candidate parameters for limit setting after the QA/QC data assessment process.

QA/QC data assessment has confirmed that the majority of the effluent monitoring data for the MISA Pulp and Paper Sector is of reliable quality and is satisfactory for use in the development of effluent limits.

TABLE 5

CANDIDATE PARAMETERS FOR THE PULP & PAPER SECTOR
SULPHATE (KRAFT) CATEGORY
AFTER QA/QC DATA ASSESSMENT

		COMPANY NUMBER								
ATG	PARAMETER	6	8	9	10	11	14	16	19	21
1	COD	1	1	1	1	1	.	1	1	1
4a	Ammonia plus Ammonium		1		1	1	1	1	1	1
	Total Kjeldahl nitrogen	1	1	1	1	1	1	1	1	1
4b	Nitrate+Nitrite		1		1				1	1
5a	DOC	.	.	.	.	.	1	.	.	.
6	Total phosphorus	1	1	1	1	1	1	1	1	1
7	Specific conductance	1	1	1	1	1	1	1	1	1
8	Total suspended solids	1	1	1	1	1	1	1	1	1
	VSS	1	1	.	.	.	1	.	1	.
9	Aluminum	1	1	1	1	1	1	1	1	1
	Chromium		.	1				1	1	
	Copper	1		1	1		1	1	1	1
	Nickel						1	1	1	
	Zinc	1	1	1	1	1	1	1	1	1
12	Mercury							1		
15	Sulphide	1	1	1	1	1	1	1	1	1
16	Bromodichloromethane				1	.				
	Chloroform	1	2	1	1	1	1	2	1	1
17	Benzene				1	.	1			1
	Styrene				1	.				3
	Toluene	1			1	.	1			1
19	Acenaphthylene				1					
	Camphene	1						1		1
	Chrysene				1					
	Fluoranthene				1					
	Naphthalene				1					
	Phenanthrene				1					
	Pyrene				1					
20	2,4,6-Trichlorophenol	1		1		1	1		1	3
	2,4-Dichlorophenol	1	1	1					1	3
	Phenol			2	3	1				1
	m-Cresol									1
	o-Cresol	1			1					
	p-Cresol									1
23	1,2,4-Trichlorobenzene									2
	2,4,5-Trichlorotoluene									3
24	2,3,7,8 TCDD								1	
	Octachlorodibenzo-p-dioxin	1		1	1	1		1	1	
	Octachlorodibenzofuran							1	1	
	Total H6CDD								1	
	Total H6CDF							1		
	Total H7CDD							2		
	Total PCDD							1	1	
	Total PCDF							1	1	
	Total TCDD							1	1	
	Total TCDF	1	1	1	1		1	1	1	3
26	Abietic Acid	1	1	1	1	1		1	1	1
	Chlorodehydroabietic Acid	2	1	1	1			1	1	1
	Dehydroabietic Acid	1	1	1	1	1	1	1	1	1
	Isopimaric Acid	1	3	1	1	2		1		1
	Levopimaric Acid	1	1	1	1	.		1		1
	Neoabietic Acid	1	2	1	1	1		1		1
	Oleic Acid	1	1	1	1	1		1	1	
	Pimaric Acid	1	3	1	1	1		1		1

TABLE 5 (cont'd)

CANDIDATE PARAMETERS FOR THE PULP & PAPER SECTOR
SULPHATE (KRAFT) CATEGORY
AFTER QA/QC DATA ASSESSMENT

		COMPANY NUMBER								
ATG	PARAMETER	6	8	9	10	11	14	16	19	21
PP1	BOD, 5 day, Total Demand	1	1	1	1	1	1	1	1	1
PP2	Adsorbable Organic Halide	1	1	1	1	1	1	1	1	1
PP3	Dichlorodehydroabietic Ac.	1	1	1	1	1		1	1	1

LEGEND:
1 = Data are of reliable quality
2 = Data are of limited quality
3 = Data are of unreliable quality
. = not monitored at this mill / no data available

(Refer to Appendix A for mill numbering system)

TABLE 6

CANDIDATE PARAMETERS FOR THE PULP & PAPER SECTOR
SULPHITE - MECHANICAL CATEGORY
AFTER QA/QC DATA ASSESSMENT

		COMPANY NO.	1	2		3	4	7	23	24	25
ATG	PARAMETER	CONTROL PT.	0100	0100	0200	0100	0100	0100	0100	0100	0100
1	COD		.	.	.	.	.	1	.	1	1
4a	Ammonia plus Ammonium				1	1			1		
	Total Kjeldahl nitrogen		1	1	1	1	1	1	1	1	1
4b	Nitrate+Nitrite		1			1	1	1	1		
5a	DOC		1	1	1	1	1		1	.	.
6	Total phosphorus		1	1	1		1	1	1	1	1
7	Specific conductance		1	1	1	1	1	1	1	1	
8	Total suspended solids		1	1	1	1	1	1	1	1	1
	VSS		.	.	.	.	.	.	1	.	.
9	Aluminum		1	1	1	1	1	1	1	1	1
	Copper		1	1	1			1	1	1	1
	Zinc		1	1	1	1	1	1	1	1	2
16	Chloroform		1	2	2	1	1	1	1	1	1
	Chloromethane									2	.
17	Benzene		3			2	3			3	.
	Styrene					1					.
	Toluene		3	1	1	1	1		1	3	1
	o-Xylene				1	1					.
19	Camphene		1		1						
20	Phenol		1	2	2		1			1	1
	m-Cresol		1	1	1		1				
	p-Cresol			1	1		1			1	
24	Octachlorodibenzo-p-dioxin			1	1		3	1		1	1
	Octachlorodibenzofuran		1								
26	Abietic Acid		1	1	1	1	1	1		1	1
	Chlorodehydroabietic Acid							2			2
	Dehydroabietic Acid		1	1	1	1	1	1	1	1	1
	Isopimaric Acid		1	1	1	1	1	1		1	1
	Levopimaric Acid		1	1	1		1	1		1	.
	Neoabietic Acid		1	1	1		1	1		1	1
	Oleic Acid		1	1	1		1	1		1	1
	Pimaric Acid		1	1	1	1	1	1		1	1
PP1	BOD, 5 day, Total Demand		1	1	1	1	1	1	1	1	1

LEGEND:
1 = Data are of reliable quality
2 = Data are of limited quality
3 = Data are of unreliable quality
. = not monitored at this mill / no data available

(Refer to Appendix A for mill numbering system)

TABLE 7

CANDIDATE PARAMETERS FOR THE PULP & PAPER SECTOR
CORRUGATING CATEGORY
AFTER QA/QC DATA ASSESSMENT

		COMPANY NO.	13	20	
ATG	PARAMETER	CONTROL PT.	0100	1200	1300
1	COD		1	.	.
4a	Ammonia plus Ammonium		1	3	3
	Total Kjeldahl nitrogen		1	3	3
4b	Nitrate+Nitrite		1	3	3
5a	DOC		.	3	3
6	Total phosphorus		1	3	3
7	Specific conductance		1	3	3
8	Total suspended solids		1	3	3
	VSS		.	.	3
9	Aluminum		1	3	3
	Cadmium		1	3	3
	Chromium		1	3	3
	Cobalt			3	3
	Copper		1	3	3
	Lead			3	3
	Molybdenum				3
	Nickel			3	3
	Thallium			3	3
	Zinc		1	3	3
16	Chloroform		1		
20	Phenol		1		
	o-Cresol		1		
24	Octachlorodibenzo-p-dioxin		1		
	Octachlorodibenzofuran		1		
	Total H6CDD		1		
	Total H7CDD		1		
	Total H7CDF		1		
	Total TCDF		1		
26	Abietic Acid		1		3
	Chlorodehydroabietic Acid		2	3	3
	Dehydroabietic Acid		1	3	3
	Isopimaric Acid		1	3	3
	Levopimaric Acid			3	3
	Neoabietic Acid		1	3	
	Oleic Acid		1	3	3
	Pimaric Acid		1	3	3
PP1	BOD, 5 day, Total Demand		1	3	3

LEGEND:
1 = Data are of reliable quality
2 = Data are of limited quality
3 = Data are of unreliable quality
. = not monitored at this mill / no data available

(Refer to Appendix A for mill numbering system)

TABLE 8

CANDIDATE PARAMETERS FOR THE PULP & PAPER SECTOR DEINKING/BOARD/FINE PAPERS/TISSUE CATEGORY AFTER QA/QC DATA ASSESSMENT

		COMPANY NUMBER							
ATG	PARAMETER	5	12	15	17	18	22	26	27
1	COD	.	1	1	1	1	.	1	1
4a	Ammonia plus Ammonium			1				1	
	Total Kjeldahl nitrogen	1	1	1	1	1	1	1	1
4b	Nitrate+Nitrite		1	1			1		
5a	DOC	1		.	.	.	1	.	.
6	Total phosphorus	1			1	1	1	1	1
7	Specific conductance	1	1	1	1	1	1	1	1
8	Total suspended solids	1	1	1		1	1	1	1
	VSS	.	.	.	.	.	1	1	.
9	Aluminum	1	1	1	1	1	1	1	1
	Chromium								1
	Copper	3	1	1	1		1		1
	Zinc	3	3	1	1	1	1	3	1
16	1,1-Dichloroethane					1			3
	1,1-Dichloroethylene	3							1
	Bromodichloromethane						1		
	Chloroform		1	1	1		2	3	1
	Dibromochloromethane						1		
	Tetrachloroethylene					1			
	Trichloroethylene					1			
17	Benzene	3	1				3		1
	Toluene	1				1		1	1
	m-Xylene and p-Xylene	3					1		
	o-Xylene	1					1		
19	2-Methylnaphthalene					1			
	Naphthalene			1		1			1
20	Pentachlorophenol								1
	Phenol	1				1		3	1
	m-Cresol							1	2
	p-Cresol							3	
23	1,2,3,4-Tetrachlorobenzene			1					
	1,2,3-Trichlorobenzene			1					
	1,2,4-Trichlorobenzene			2					
24	Octachlorodibenzo-p-dioxin	1			3	.	1		
	Total TCDF					1			
26	Abietic Acid	3	1	3		1			1
	Chlorodehydroabietic Acid		2						2
	Dehydroabietic Acid	1	1	1		1	1	1	1
	Isopimaric Acid	1	1			1			1
	Levopimaric Acid	3	1			1			
	Neoabietic Acid	2							
	Oleic Acid	3				3		3	1
	Pimaric Acid	1	1	3		1		1	3
PP1	BOD, 5 day, Total Demand	1	1	1	1	1	1	1	1
PP2	Adsorbable Organic Halide	.	.	.	.	.	1	.	.

LEGEND:
1 = Data are of reliable quality
2 = Data are of limited quality
3 = Data are of unreliable quality
. = not monitored at this mill / no data available

(Refer to Appendix A for mill numbering system)

APPENDIX A

MISA Pulp and Paper Sector

APPENDIX A - MISA PULP AND PAPER SECTOR

SULPHATE (KRAFT) SUBCATEGORY

COMPANY	#
Boise Cascade Canada Ltd. (Fort Frances)	6
Canadian Pacific Forest Products (Dryden)	8
Canadian Pacific Forest Products (Thunder Bay)	9
Domtar Inc., Fine Papers Division (Cornwall)	10
Domtar Inc., Containerboard Division (Red Rock)	11
E.B. Eddy Forest Products Ltd. (Espanola)	14
James River-Marathon Ltd.	16
Kimberly-Clark Canada Inc. (Terrace Bay)	19
Malette Kraft Pulp and Power Co.	21

SULPHITE/MECHANICAL SUBCATEGORY

COMPANY	#
Abitibi-Price Inc., Iroquois Falls Division	1
Abitibi-Price Inc., Fort William Division	2
Abitibi-Price Inc., Provincial Papers Division	3
Abitibi-Price Inc., Thunder Bay Division	4
Boise Cascade Canada Ltd. (Kenora)	7
Quebec & Ontario Paper Company Ltd.	23
St. Marys Paper Inc.	24
Spruce Falls Power and Paper Company Ltd.	25

CORRUGATING SUBCATEGORY

COMPANY	#
Domtar Inc., Containerboard Division (Trenton)	13
MacMillan Bloedel Ltd.	20

DEINKING/BOARD/FINE PAPERS/TISSUE SUBCATEGORY

COMPANY	#
Beaver Wood Fibre Company Ltd.	5
Domtar Inc., Fine Papers Division (St. Catharines)	12
E.B. Eddy Forest Products Ltd. (Ottawa)	15
Kimberly-Clark Canada Inc. (Huntsville)	17
Kimberly-Clark Canada Inc. (St. Catharines)	18
Noranda Forest Inc., Recycled Papers	22
Strathcona Paper Company	26
Trent Valley, **Paperboard Industries Corporation**	27

APPENDIX B

Remark Codes

APPENDIX B - REMARK CODES

REMARK CODE (PREMK)	DESCRIPTION
<	Actual amount less than reported
>	Actual amount probably greater than reported
A	Approximate value
<DL	Reported value = MDL: measured amt. MDL (non-zero)
<T	A measurable trace amount: interpret with caution
<W	No measurable response (zero): reported value
<WE	No measurable response (diln/concn): reported value
AR	Attached report
I	Interference suspected
IC	Interference: colour
IM	Interference: Sample Matrix
N/A (or !)	No data will be reported: see textual report
OLD	Old: sample exceeds maximum storage time
UQC	Data unreliable: possible lab QC problem(s)
!IN	No data: insufficient volume due to inspection
!NM	No effluent - no sample available
UCR	Data unreliable: could not confirm by reanalysis

APPENDIX C

Regulation Method Detection Limits

APPENDIX C: REGULATION METHOD DETECTION LIMITS

ATG	PARAMETER	RMDL	RUNIT
1	COD	10.000	mg/L
4a	Ammonia plus Ammonium	.250	mg/L
	Total Kjeldahl nitrogen	.500	mg/L
4b	Nitrate+Nitrite	.250	mg/L
5a	DOC	.500	mg/L
6	Total phosphorus	.100	mg/L
7	Specific conductance	5.000	uS/cm
	Conductivity, average	5.000	uS/cm
	Conductivity, minimum	5.000	uS/cm
	Conductivity, maximum	5.000	uS/cm
8	Total suspended solids	5.000	mg/L
	VSS	10.000	mg/L
9	Aluminum	30.000	ug/L
	Beryllium	10.000	ug/L
	Cadmium	2.000	ug/L
	Chromium	20.000	ug/L
	Cobalt	20.000	ug/L
	Copper	10.000	ug/L
	Lead	30.000	ug/L
	Molybdenum	20.000	ug/L
	Nickel	20.000	ug/L
	Silver	30.000	ug/L
	Thallium	30.000	ug/L
	Vanadium	30.000	ug/L
	Zinc	10.000	ug/L
12	Mercury	.100	ug/L
15	Sulphide	.020	mg/L
16	1,1,2,2-Tetrachloroethane	4.300	ug/L
	1,1,2-Trichloroethane	.600	ug/L
	1,1-Dichloroethane	.800	ug/L
	1,1-Dichloroethylene	2.800	ug/L
	1,2-Dichlorobenzene	1.400	ug/L
	1,2-Dichloroethane	.800	ug/L
	1,2-Dichloropropane	.900	ug/L
	1,3-Dichlorobenzene	1.100	ug/L
	1,4-Dichlorobenzene	1.700	ug/L
	Bromodichloromethane	.800	ug/L
	Bromoform	3.700	ug/L
	Bromomethane	3.700	ug/L
	Carbon tetrachloride	1.300	ug/L
	Chlorobenzene	.700	ug/L
	Chloroform	.700	ug/L
	Chloromethane	3.700	ug/L
	Cis-1,3-Dichloropropylene	1.400	ug/L
	Dibromochloromethane	1.100	ug/L
	Ethylene dibromide	1.000	ug/L
	Methylene chloride	1.300	ug/L

ATG	PARAMETER	RMDL	RUNIT
16	Tetrachloroethylene	1.100	ug/L
	Trans-1,2-Dichloroethylene	1.400	ug/L
	Trans-1,3-Dichloropropylene	1.400	ug/L
	Trichloroethylene	1.900	ug/L
	Trichlorofluoromethane	1.000	ug/L
	Vinyl chloride	4.000	ug/L
17	Benzene	.500	ug/L
	Styrene	.500	ug/L
	Toluene	.500	ug/L
	o-Xylene	.500	ug/L
	m-Xylene and p-Xylene	1.100	ug/L
19	Acenaphthene	1.300	ug/L
	5-nitro, Acenaphthene	4.300	ug/L
	Acenaphthylene	1.400	ug/L
	Anthracene	1.200	ug/L
	Benz(a)anthracene	.500	ug/L
	Benzo(a)pyrene	.600	ug/L
	Benzo(b)fluoranthene	.700	ug/L
	Benzo(g,h,i)perylene	.700	ug/L
	Benzo(k)fluoranthene	.700	ug/L
	Camphene	3.500	ug/L
	1-Chloronaphthalene	2.500	ug/L
	2-Chloronaphthalene	1.800	ug/L
	Chrysene	.300	ug/L
	Dibenz(a,h)anthracene	1.300	ug/L
	Fluoranthene	.400	ug/L
	Fluorene	1.700	ug/L
	Indeno(1,2,3-cd)pyrene	1.300	ug/L
	Indole	1.900	ug/L
	1-Methylnaphthalene	3.200	ug/L
	2-Methylnaphthalene	2.200	ug/L
	Naphthalene	1.600	ug/L
	Perylene	1.500	ug/L
	Phenanthrene	.400	ug/L
	Pyrene	.400	ug/L
20	2,3,4,5-Tetrachlorophenol	.400	ug/L
	2,3,4,6-Tetrachlorophenol	2.800	ug/L
	2,3,5,6-Tetrachlorophenol	1.600	ug/L
	2,3,4-Trichlorophenol	.600	ug/L
	2,3,5-Trichlorophenol	1.300	ug/L
	2,4,5-Trichlorophenol	1.300	ug/L
	2,4,6-Trichlorophenol	1.300	ug/L
	2,4-Dimethylphenol	7.300	ug/L
	2,4-Dinitrophenol	42.000	ug/L
	2,4-Dichlorophenol	1.700	ug/L
	2,6-Dichlorophenol	2.000	ug/L
	4,6-Dinitro-o-cresol	24.000	ug/L
	2-Chlorophenol	3.700	ug/L
	4-Chloro-3-methylphenol	1.500	ug/L
	4-Nitrophenol	1.400	ug/L

ATG	PARAMETER	RMDL	RUNIT
20	m-Cresol	3.400	ug/L
	o-Cresol	3.700	ug/L
	p-Cresol	3.500	ug/L
	Pentachlorophenol	1.300	ug/L
	Phenol	2.400	ug/L
23	1,2,3,4-Tetrachlorobenzene	.010	ug/L
	1,2,3,5-Tetrachlorobenzene	.010	ug/L
	1,2,4,5-Tetrachlorobenzene	.010	ug/L
	1,2,3-Trichlorobenzene	.010	ug/L
	1,2,4-Trichlorobenzene	.010	ug/L
	2,4,5-Trichlorotoluene	.010	ug/L
	Hexachlorobenzene	.010	ug/L
	Hexachlorobutadiene	.010	ug/L
	Hexachlorocyclopentadiene	.010	ug/L
	Hexachloroethane	.010	ug/L
	Octachlorostyrene	.010	ug/L
	Pentachlorobenzene	.010	ug/L
24	2,3,7,8 TCDD	.020	ng/L
	Octachlorodibenzo-p-dioxin	.030	ng/L
	Octachlorodibenzofuran	.030	ng/L
	Total TCDD	.020	ng/L
	Total H7CDF	.030	ng/L
	Total PCDD	.020	ng/L
	Total H6CDF	.020	ng/L
	Total H7CDD	.030	ng/L
	Total PCDF	.015	ng/L
	Total H6CDD	.030	ng/L
	Total TCDF	.015	ng/L
26	Abietic Acid	.005	mg/L
	Chlorodehydroabietic Acid	.005	mg/L
	Dehydroabietic Acid	.005	mg/L
	Isoprimaric Acid	.005	mg/L
	Levopimaric Acid	.005	mg/L
	Neoabietic Acid	.005	mg/L
	Oleic Acid	.005	mg/L
	Pimaric Acid	.005	mg/L
27	PCBT	.100	ug/L
PP1	BOD, 5 day, Total Demand	5.000	mg/L
PP2	Adsorbable Organic Halide	.050	mg/L
PP3	Dichlorodehydroabietic Ac.	.005	mg/L

APPENDIX D

Potential Candidate Parameters for the Pulp & Paper Sector Before QA/QC Data Assessment (Tables 1 to 4)

TABLE 1

POTENTIAL CANDIDATE PARAMETERS FOR THE PULP & PAPER SECTOR SULPHATE (KRAFT) CATEGORY BEFORE QA/QC DATA ASSESSMENT

		COMPANY NUMBER								
ATG	PARAMETER	6	8	9	10	11	14	16	19	21
1	COD	X	X	X	X	X	.	X	X	X
4a	Ammonia plus Ammonium		X		X	X	X	X	X	X
	Total Kjeldahl nitrogen	X	X	X	X	X	X	X	X	X
4b	Nitrate+Nitrite		X		X				X	X
5a	DOC	.	.	.	.	.	X	.	.	.
6	Total phosphorus	X	X	X	X	X	X	X	X	X
7	Specific conductance	X	X	X	X	X	X	X	X	X
8	Total suspended solids	X	X	X	X	X	X	X	X	X
	VSS	X	X	.	.	.	X	.	X	.
9	Aluminum	X	X	X	X	X	X	X	X	X
	Chromium		.	X				X	X	
	Copper	X		X	X		X	X	X	X
	Molybdenum		X							
	Nickel						X	X	X	
	Thallium	X	X							
	Vanadium							X		
	Zinc	X	X	X	X	X	X	X	X	X
12	Mercury							X	X	
15	Sulphide	X	X	X	X	X	X	X	X	X
16	1,2-Dichloroethane				.	.				X
	Bromodichloromethane	X	X	X	X	.				
	Chloroform	X	X	X	X	X	X	X	X	X
	Methylene chloride	X			.	.	X			X
17	Benzene				X	.	X			X
	Styrene				X	.				X
	Toluene	X			X	.	X			X
19	Acenaphthylene				X					
	Benzo(g,h,i)perylene	X	X	X						
	Benzo(k)fluoranthene	X	X	X						
	Camphene	X						X		X
	Chrysene				X					
	Dibenz(a,h)anthracene	X	X	X						
	Fluoranthene				X					
	Naphthalene				X					
	Phenanthrene				X					
	Pyrene				X					
20	2,3,5-Trichlorophenol	X	X	X						
	2,4,6-Trichlorophenol	X		X		X	X		X	X
	2,4-Dichlorophenol	X	X	X					X	X
	Phenol			X	X	X				X
	m-Cresol									X
	o-Cresol	X			X					
	p-Cresol									X
23	1,2,3,4-Tetrachlorobenzene		X							
	1,2,3,5-Tetrachlorobenzene	X	X							
	1,2,3-Trichlorobenzene	X	X	X						
	1,2,4,5-Tetrachlorobenzene	X	X	X						
	1,2,4-Trichlorobenzene									X
	2,4,5-Trichlorotoluene	X	X	X						X
	Hexachlorobenzene	X	X	X						
	Hexachlorobutadiene		X	X						
	Hexachlorocyclopentadiene	X								
	Hexachloroethane			X						
	Octachlorostyrene	X	X	X						
	Pentachlorobenzene	X	X							

TABLE 1 (cont'd)

POTENTIAL CANDIDATE PARAMETERS FOR THE PULP & PAPER SECTOR SULPHATE (KRAFT) CATEGORY BEFORE QA/QC DATA ASSESSMENT

		COMPANY NUMBER								
ATG	PARAMETER	6	8	9	10	11	14	16	19	21
24	2,3,7,8 TCDD								X	
	Octachlorodibenzo-p-dioxin	X		X	X	X		X	X	
	Octachlorodibenzofuran							X	X	
	Total H6CDD								X	
	Total H6CDF							X		
	Total H7CDD							X		
	Total H7CDF								X	
	Total PCDD							X	X	
	Total PCDF							X	X	
	Total TCDD							X	X	
	Total TCDF	X	X	X	X		X	X	X	X
26	Abietic Acid	X	X	X	X	X		X	X	X
	Chlorodehydroabietic Acid	X	X	X	X			X	X	X
	Dehydroabietic Acid	X	X	X	X	X	X	X	X	X
	Isopimaric Acid	X	X	X	X	X		X		X
	Levopimaric Acid	X	X	X	X	.		X		X
	Neoabietic Acid	X	X	X	X	X		X		X
	Oleic Acid	X	X	X	X	X		X	X	
	Pimaric Acid	X	X	X	X	X		X		X
PP1	BOD, 5 day, Total Demand	X	X	X	X	X	X	X	X	X
PP2	Adsorbable Organic Halide	X	X	X	X	X	X	X	X	X
PP3	Dichlorodehydroabietic Ac.	X	X	X	X	X		X	X	X

Note: X = potential candidate parameter for this mill.
. = not monitored at this mill / no data available.

(Refer to Appendix A for mill numbering system)

TABLE 2

POTENTIAL CANDIDATE PARAMETERS FOR THE PULP & PAPER SECTOR SULPHITE - MECHANICAL CATEGORY BEFORE QA/QC DATA ASSESSMENT

		COMPANY NO.	1	2		3	4	7	23	24	25
ATG	PARAMETER	CONTROL PT.	0100	0100	0200	0100	0100	0100	0100	0100	0100
1	COD		.	.	.	.	.	X	.	X	X
4a	Ammonia plus Ammonium				X	X			X		
	Total Kjeldahl nitrogen		X	X	X	X	X	X	X	X	X
4b	Nitrate+Nitrite		X			X	X	X	X		
5a	DOC		X	X	X	X	X		X	.	.
6	Total phosphorus		X	X	X		X	X	X	X	X
7	Specific conductance		X	X	X	X	X	X	X	X	
8	Total suspended solids		X	X	X	X	X	X	X	X	X
	VSS		.	.	.	.	.	.	X	.	.
9	Aluminum		X	X	X	X	X	X	X	X	X
	Copper		X	X	X			X	X	X	X
	Zinc		X	X	X	X	X	X	X	X	X
16	1,2-Dichloroethane		X	X	X	X	X		X	X	.
	Bromodichloromethane							X			.
	Chloroform		X	X	X	X	X	X	X	X	X
	Chloromethane									X	.
	Methylene chloride		X	X	X	X	X		X	X	.
17	Benzene		X			X	X			X	.
	Styrene					X					.
	Toluene		X	X	X	X	X		X	X	X
	o-Xylene				X	X					.
19	Benzo(g,h,i)perylene							X			
	Benzo(k)fluoranthene							X			
	Camphene		X		X						
	Dibenz(a,h)anthracene							X			
20	Phenol		X	X	X		X			X	X
	m-Cresol		X	X	X		X				
	p-Cresol			X	X		X			X	
23	1,2,3-Trichlorobenzene							X			
	1,2,4-Trichlorobenzene							X			
	2,4,5-Trichlorotoluene							X			
	Pentachlorobenzene							X			
24	Octachlorodibenzo-p-dioxin			X	X		X	X		X	X
	Octachlorodibenzofuran		X								
26	Abietic Acid		X	X	X	X	X	X		X	X
	Chlorodehydroabietic Acid							X			X
	Dehydroabietic Acid		X	X	X	X	X	X	X	X	X
	Isopimaric Acid		X	X	X	X	X	X		X	X
	Levopimaric Acid		X	X	X		X	X		X	.
	Neoabietic Acid		X	X	X		X	X		X	X
	Oleic Acid		X	X	X		X	X		X	X
	Pimaric Acid		X	X	X	X	X	X		X	X
PP1	BOD, 5 day, Total Demand		X	X	X	X	X	X	X	X	X

Note: X = potential candidate parameter for this mill.
. = not monitored at this mill / no data available.

(Refer to Appendix A for mill numbering system)

TABLE 3

POTENTIAL CANDIDATE PARAMETERS FOR THE PULP & PAPER SECTOR CORRUGATING CATEGORY BEFORE QA/QC DATA ASSESSMENT

		COMPANY NO.	13	20	
ATG	PARAMETER	CONTROL PT.	0100	1200	1300
1	COD		X	.	.
4a	Ammonia plus Ammonium		X	X	X
	Total Kjeldahl nitrogen		X	X	X
4b	Nitrate+Nitrite		X	X	X
5a	DOC		.	X	X
6	Total phosphorus		X	X	X
7	Specific conductance		X	X	X
8	Total suspended solids		X	X	X
	VSS		.	.	X
9	Aluminum		X	X	X
	Cadmium		X	X	X
	Chromium		X	X	X
	Cobalt			X	X
	Copper		X	X	X
	Lead			X	X
	Molybdenum				X
	Nickel			X	X
	Thallium			X	X
	Vanadium			X	X
	Zinc		X	X	X
16	Chloroform		X		
20	Phenol		X		
	o-Cresol		X		
24	Octachlorodibenzo-p-dioxin		X		
	Octachlorodibenzofuran		X		
	Total H6CDD		X		
	Total H7CDD		X		
	Total H7CDF		X		
	Total TCDF		X		
26	Abietic Acid		X		X
	Chlorodehydroabietic Acid		X	X	X
	Dehydroabietic Acid		X	X	X
	Isopimaric Acid		X	X	X
	Levopimaric Acid			X	X
	Neoabietic Acid		X	X	
	Oleic Acid		X	X	X
	Pimaric Acid		X	X	X
PP1	BOD, 5 day, Total Demand		X	X	X

Note: X = potential candidate parameter for this mill.
. = not monitored at this mill / no data available.

(Refer to Appendix A for mill numbering system)

TABLE 4

POTENTIAL CANDIDATE PARAMETERS FOR THE PULP & PAPER SECTOR DEINKING/BOARD/FINE PAPERS/TISSUE CATEGORY BEFORE QA/QC DATA ASSESSMENT

		COMPANY NUMBER							
ATG	PARAMETER	5	12	15	17	18	22	26	27
1	COD	.	X	X	X	X	.	X	X
4a	Ammonia plus Ammonium			X				X	
	Total Kjeldahl nitrogen	X	X	X	X	X	X	X	X
4b	Nitrate+Nitrite		X	X			X		
5a	DOC	X		.	.	.	X	.	.
6	Total phosphorus	X			X	X	X	X	X
7	Specific conductance	X	X	X	X	X	X	X	X
8	Total suspended solids	X	X	X		X	X	X	X
	VSS	.	.	.	.	.	X	X	.
9	Aluminum	X	X	X	X	X	X	X	X
	Chromium								X
	Copper	X	X	X	X		X		X
	Zinc	X	X	X	X	X	X	X	X
16	1,1-Dichloroethane					X			X
	1,1-Dichloroethylene	X							X
	1,2-Dichloroethane			X			X	X	X
	Bromodichloromethane						X		
	Chloroform		X	X	X		X	X	X
	Dibromochloromethane						X		
	Methylene chloride	X	X			X		X	X
	Tetrachloroethylene					X			
	Trichloroethylene					X			
17	Benzene	X	X				X		X
	Toluene	X				X		X	X
	m-Xylene and p-Xylene	X					X		
	o-Xylene	X					X		
19	2-Methylnaphthalene					X			
	Naphthalene			X		X			X
20	Pentachlorophenol								X
	Phenol	X				X		X	X
	m-Cresol							X	X
	p-Cresol							X	
23	1,2,3,4-Tetrachlorobenzene			X					
	1,2,3-Trichlorobenzene			X					
	1,2,4-Trichlorobenzene			X					
	Hexachlorocyclopentadiene						X		
24	Octachlorodibenzo-p-dioxin	X	X		X	.	X		
	Total H6CDF		X						
	Total TCDF					X			
26	Abietic Acid	X	X	X		X			X
	Chlorodehydroabietic Acid		X						X
	Dehydroabietic Acid	X	X	X		X	X	X	X
	Isopimaric Acid	X	X			X			X
	Levopimaric Acid	X	X			X			
	Neoabietic Acid	X							
	Oleic Acid	X				X		X	X
	Pimaric Acid	X	X	X		X		X	X
PP1	BOD, 5 day, Total Demand	X	X	X	X	X	X	X	X
PP2	Adsorbable Organic Halide	.	.	.	.	.	X	.	.

Note: X = potential candidate parameter for this mill.
. = not monitored at this mill / no data available.

(Refer to Appendix A for mill numbering system)

APPENDIX E

Specific Parameter QA/QC Assessment by Subcategory

SULPHATE (KRAFT) SUBCATEGORY

ATG 9:

Aluminum: RMDL = 30 ug/L
Candidate parameter for all 9 mills. Consistently classified as frequent high (effluent levels range from 9.0 to 159.4 * RMDL). No problems with the QA/QC data.
CONCLUSION: Data are of reliable quality.

Chromium: RMDL = 20 ug/L
Candidate parameter for CPFP (Thunder Bay), James River-Marathon, and Kimberly-Clark (Terrace Bay). Classified as frequent medium, infrequent low and frequent high, respectively. No problems with the QA/QC data.
CONCLUSION: Data are of reliable quality.

Copper: RMDL = 10 ug/L
Candidate parameter for Boise Cascade (Fort Frances), CPFP (Thunder Bay), Domtar (Cornwall), E.B. Eddy (Espanola), James River-Marathon, Kimberly-Clark (Terrace Bay), and Malette. Generally classified as frequent low. No problems with the QA/QC data.
CONCLUSION: Data are of reliable quality.

Molybdenum: RMDL = 20 ug/L
Unique candidate parameter for CPFP (Dryden). Classified as frequent low, at an average ratio of 1.0 * RMDL. Both the effluent and travelling blank data are at levels near the RMDL, indicating a false positive result.
CONCLUSION: Remove from the candidate parameter list.

Nickel: RMDL = 20 ug/L
Candidate parameter for E.B. Eddy (Espanola), James River-Marathon, and Kimberly-Clark (Terrace Bay). Classified as frequent low, frequent low and infrequent low, at an average ratio of 1.6, 1.5, and 0.7 * RMDL respectively. No problems with the QA/QC data. For Kimberly-Clark both the effluent and travelling blank data are at levels near the RMDL, indicating a false positive result.
CONCLUSION: Data are of reliable quality.

Thallium: RMDL = 30 ug/L
Candidate parameter for Boise Cascade (Fort Frances) and CPFP (Dryden). Both classified as frequent low, at average effluent ratios of 0.9 * RMDL. The average differences between the effluent and duplicate samples are 0.2 and 0.3 * RMDL respectively. Both the effluent and travelling blank data are at levels near the RMDL, indicating false positive results.
CONCLUSION: Remove from the candidate parameter list.

Vanadium: **RMDL = 30 ug/L**
Unique candidate parameter for James River-Marathon. Classified as infrequent low, at an average ratio of 1.0 * RMDL. Both the effluent and travelling blank data are at levels near the RMDL, indicating a false positive result.
CONCLUSION: **Remove from the candidate parameter list.**

Zinc: **RMDL = 10 ug/L**
Candidate parameter for all 9 mills. Classified as frequent high at all but two mills, that are classified as frequent medium. No problems with the QA/QC data.
CONCLUSION: **Data are of reliable quality.**

ATG 12:

Mercury: **RMDL = 0.10 ug/L**
Candidate parameter for James River-Marathon and Kimberly-Clark (Terrace Bay). Classified as frequent low and infrequent low, respectively. No problems with the QA/QC data for James River-Marathon. For Kimberly-Clark both the effluent and travelling blank data are at levels near the RMDL, indicating a false positive result.
CONCLUSION: **Data are of reliable quality for James River-Marathon. Remove from the candidate parameter list for Kimberly-Clark (Terrace Bay).**

ATG 15:

Sulphide: **RMDL = 0.02 mg/L**
Candidate parameter for all 9 mills. Generally classified as frequent high and frequent medium. No problems with the QA/QC data.
CONCLUSION: **Data are of reliable quality.**

ATG 16:

1,2-dichloroethane: **RMDL = 0.80 ug/L**
Unique candidate parameter for Malette. Classified as frequent low, at an average ratio of 1.0 * RMDL. No problems with the QA/QC data. Candidate parameter for Malette because their MDL (0.82 ug/L) is greater than the RMDL.
CONCLUSION: **Remove from the candidate parameter list because the MDL is less than 1.6 * RMDL.**

Bromodichloromethane: RMDL = 0.80 ug/L
Candidate parameter for Boise Cascade (Fort Frances), CPFP (Dryden), CPFP (Thunder Bay) and Domtar (Cornwall). Classified as frequent low at all but Domtar (frequent medium). No problems with the QA/QC data for Domtar, but for the other 3 mills, this parameter is a candidate because their MDL's are higher than the RMDL (MDL = 0.95 ug/L).

CONCLUSION: Data for Domtar are of reliable quality. Remove as a candidate parameter for Boise Cascade, CPFP (Dryden) and CPFP (Thunder Bay) because their MDL's are less than 1.6 * RMDL.

Chloroform: RMDL = 0.7 ug/L
Candidate parameter for all 9 mills. Consistently classified as frequent high. Detected in travelling blanks at Boise Cascade (Fort Frances), but the levels found in the effluent are much greater than those found in the blanks. Recoveries are good in all cases. The average differences between the duplicate and effluent samples are large, but the levels found in the process effluent are much greater. Very high corrections made to the data for CPFP (Dryden) and James River-Marathon.

CONCLUSION: Data for all mills except CPFP (Dryden) and James River-Marathon are of reliable quality. Data for CPFP (Dryden) and James River-Marathon should be used with caution.

Methylene Chloride: RMDL = 1.3 ug/L
Candidate parameter for Boise Cascade (Fort Frances), E.B. Eddy (Espanola) and Malette. Classified as infrequent medium, frequent low and frequent low, respectively. Detected in travelling blanks at a level of 3.0 * RMDL for Malette. The average difference between the duplicate and effluent samples is 24.3 * RMDL for Malette whereas its average effluent level is 3.8 * RMDL. Detected in travelling blanks at a level of 8 * RMDL for Boise whereas the average effluent level is 19 * RMDL. One of the travelling spiked blank recoveries for Malette is 1,571% indicating a laboratory artifact problem. Note that methylene chloride has previously been found to have been a laboratory artifact.

CONCLUSION: Data for E.B. Eddy appear to be of reliable quality. Data for Malette and Boise appear highly suspect and unreliable and should not be used for limit setting. The data from the Pre-Regulation and MISA Monitoring Programs show the apparent presence of this contaminant in both intake water and process effluents and in a non-uniform pattern. This is suggestive of an artifact occurrence phenomenon. Remove from the candidate parameter list.

ATG 17:

Benzene: RMDL = 0.5 ug/L
Candidate parameter for Domtar (Cornwall) E.B. Eddy (Espanola), and Malette. Classified as frequent high, frequent low and infrequent low, respectively. No problems with the QA/QC data.
CONCLUSION: Data are of reliable quality.

Styrene: RMDL = 0.5 ug/L
Candidate parameter for Domtar (Cornwall) and Malette. Classified as frequent high and frequent medium, respectively. No problems with the travelling spike samples or with the recoveries. The average difference between the duplicate and effluent samples is 55.6 * RMDL for Malette whereas its average effluent ratio is 2.1 * RMDL.
CONCLUSION: Data for Domtar are of reliable quality. Data for Malette appear highly suspect and unreliable and should not be used for limit setting.

Toluene: RMDL = 0.5 ug/L
Candidate parameter for Boise Cascade (Fort Frances), Domtar (Cornwall), E.B. Eddy (Espanola) and Malette. Classified as frequent high at all but E.B. Eddy (infrequent medium). No problems with the QA/QC data.
CONCLUSION: Data are of reliable quality.

ATG 19:

Acenaphthylene: RMDL = 1.4 ug/L
Unique candidate parameter for Domtar (Cornwall). Classified as frequent medium. No problems with the QA/QC data.
CONCLUSION: Data are of reliable quality.

Benzo(g,h,i)perylene: RMDL = 0.7 ug/L
Candidate parameter for Boise Cascade (Fort Frances), CPFP (Dryden) and CPFP (Thunder Bay). Candidate parameter for all three mills because their MDL's (1.70 ug/L) are greater than the RMDL. Recovery is low for CPFP (Thunder Bay) (28%).
CONCLUSION: The MDL is greater than 1.6*RMDL, however, this parameter was not detected above the MDL during the first eleven months of monitoring nor in the final month of monitoring when the MDL was less than the RMDL. The OFIA Interlaboratory Study (September, 1991) confirms that this parameter was not detected

above the RMDL when the MDL was less than the RMDL. A review of Ministry audit data confirms the absence of this parameter in the effluent. Remove from the candidate parameter list.

Benzo(k)fluoranthene: RMDL = 0.7 ug/L
Candidate parameter for Boise Cascade (Fort Frances), CPFP (Dryden) and CPFP (Thunder Bay). Candidate parameter for all three mills because their MDL (0.80 ug/L) is greater than the RMDL. Travelling spiked blank recovery is low for CPFP (Thunder Bay) (28%).
CONCLUSION: **Remove from the candidate parameter list because the MDL is less than 1.6 * RMDL.**

Camphene: RMDL = 3.5 ug/L
Candidate parameter for Boise Cascade (Fort Frances), James River-Marathon and Malette. Classified as frequent medium, infrequent low and frequent low, respectively. No problems with the QA/QC data.
CONCLUSION: **Data are of reliable quality.**

Chrysene: RMDL = 0.30 ug/L
Unique candidate parameter for Domtar (Cornwall). Classified as frequent medium. No problems with the QA/QC data.
CONCLUSION: **Data are of reliable quality.**

Dibenz(a,h)anthracene: RMDL = 1.30 ug/L
Candidate parameter for Boise Cascade (Fort Frances), CPFP (Dryden) and CPFP (Thunder Bay). Candidate parameter for all three mills because their MDL's (1.40 ug/L) are greater than the RMDL.
CONCLUSION: **Remove from the candidate parameter list because the MDL is less than 1.6 * RMDL.**

Fluoranthene: RMDL = 0.40 ug/L
Unique candidate parameter for Domtar (Cornwall). Classified as frequent high. No problems with the QA/QC data.
CONCLUSION: **Data are of reliable quality.**

Naphthalene: RMDL = 1.60 ug/L
Unique candidate parameter for Domtar (Cornwall). Classified as frequent medium. No problems with the QA/QC data.
CONCLUSION: **Data are of reliable quality.**

Phenanthrene: **RMDL = 0.4 ug/L**
Unique candidate parameter for Domtar (Cornwall). Classified as frequent high. No problems with the QA/QC data.
CONCLUSION: **Data are of reliable quality.**

Pyrene: **RMDL = 0.4 ug/L**
Unique candidate parameter for Domtar (Cornwall). Classified as frequent high. No problems with the QA/QC data.
CONCLUSION: **Data are of reliable quality.**

ATG 20:

2,3,5-Trichlorophenol: **RMDL = 1.3 ug/L**
Candidate parameter for Boise Cascade (Fort Frances), CPFP (Dryden) and CPFP (Thunder Bay). Classified as frequent medium, frequent high and infrequent medium. No problems with the QA/QC data.
CONCLUSION: **Although the data appear to be of reliable quality, there are concerns with the contract laboratory that performed the sample analyses. The OFIA Interlaboratory Study (September, 1991) reports that split sample analysis by two other contract laboratories did not detect this parameter in the effluent. A review of Ministry audit data also confirms the absence of this parameter in the effluent. Remove from the candidate parameter list.**

2,4,6-Trichlorophenol: **RMDL = 1.3 ug/L**
Candidate parameter for Boise Cascade (Fort Frances), CPFP (Thunder Bay), Domtar (Red Rock), E.B. Eddy (Espanola), Kimberly-Clark (Terrace Bay) and Malette. Classified as frequent medium at all but Boise Cascade and CPFP, which are classified as frequent low. No problems with the QA/QC data, though the average difference between the duplicate and effluent samples for Malette is 2.7 * RMDL, whereas its average effluent level is 3.5 * RMDL.
CONCLUSION: **Data for all but Malette are of reliable quality. Data for Malette appear highly suspect and unreliable and should not be used for limit setting.**

2,4-Dichlorophenol: **RMDL = 1.7 ug/L**
Candidate parameter for Boise Cascade (Fort Frances), CPFP (Dryden), CPFP (Thunder Bay), Kimberly-Clark (Terrace Bay) and Malette. Classified as frequent medium at all but Kimberly-Clark and Malette, which are classified as frequent low. No problems with the QA/QC data, though the average

difference between the duplicate and effluent samples for Malette is 1.5 * RMDL, whereas its average effluent level is 1.7 * RMDL.

CONCLUSION: **Data for all but Malette are of reliable quality. Data for Malette appear highly suspect and unreliable and should not be used for limit setting.**

Phenol: RMDL = 2.4 ug/L
Candidate parameter for CPFP (Thunder Bay), Domtar (Cornwall), Domtar (Red Rock) and Malette. Classified as frequent high at all mills but Domtar (Red Rock), which is classified as frequent medium. No problems with travelling blanks. Recovery low for CPFP (Thunder Bay) and Domtar (Cornwall) (32%). Domtar (Cornwall) has an average difference between the duplicate and effluent samples of 37.1 * RMDL and its average effluent level is 43.1 * RMDL.

CONCLUSION: **Data for Domtar (Red Rock) and Malette are of reliable quality. Data for Domtar (Cornwall) appear highly unreliable and should not be used for limit setting. Data for CPFP appear to be of limited quality and should be used carefully.**

m-Cresol: RMDL = 3.4 ug/L
Unique candidate parameter for Malette. Classified as frequent high. No problems with the QA/QC data.

CONCLUSION: **Data are of reliable quality.**

o-Cresol: RMDL = 3.7 ug/L
Candidate parameter for Boise Cascade (Fort Frances) and Domtar (Cornwall). Classified as frequent medium and frequent low, respectively. No problems with the QA/QC data.

CONCLUSION: **Data are of reliable quality.**

p-Cresol: RMDL = 3.5 ug/L
Unique candidate parameter for Malette. Classified as infrequent low. No problems with the QA/QC data.

CONCLUSION: **Data are of reliable quality.**

ATG 23:

1,2,3,4-Tetrachlorobenzene: RMDL = 0.010 ug/L
Unique candidate parameter for CPFP (Dryden). Classified as infrequent medium. No problems with the QA/QC data.

CONCLUSION: **Data appear to be of reliable quality, but there are concerns with the contract laboratory that performed the sample analyses. The OFIA Interlaboratory Study (September, 1991) reports that split sample**

analysis by two other contract laboratories did not detect this parameter in the effluent and notes that the contract laboratory that performed the analyses for this mill had analytical difficulties in analyzing for this parameter. A review of Ministry audit data confirms the absence of this parameter in the effluent. Remove from the candidate parameter list.

1,2,3,5-Tetrachlorobenzene: RMDL = 0.010 ug/L
Candidate parameter for Boise Cascade (Fort Frances) and CPFP (Dryden). Classified as frequent high and infrequent high, respectively. No problems with the QA/QC data.

CONCLUSION: **Data appear to be of reliable quality, but there are concerns with the contract laboratory that performed the sample analyses. The OFIA Interlaboratory Study (September, 1991) reports that the contract laboratory that performed the analyses for these mills had analytical difficulties in analyzing for this parameter. A review of Ministry audit data confirms the absence of this parameter in the effluent. Remove from the candidate parameter list.**

1,2,3-Trichlorobenzene: RMDL = 0.010 ug/L
Candidate parameter for Boise Cascade (Fort Frances), CPFP (Dryden) and CPFP (Thunder Bay). All are classified as frequent high. No problem with travelling blanks and recoveries. The average difference between duplicate and effluent samples for Boise Cascade is 86.7 * RMDL whereas its average effluent level is 77.6 * RMDL.

CONCLUSION: **Data appear to be of reliable quality, but there are concerns with the contract laboratory that performed the sample analyses. The OFIA Interlaboratory Study (September, 1991) reports that split sample analysis by two other contract laboratories did not detect this parameter in the effluent and notes that the contract laboratory that performed the analyses for these mills had analytical difficulties in analyzing for this parameter. A review of Ministry audit data confirms the absence of this parameter in the effluent. Remove from the candidate parameter list.**

1,2,4,5-Tetrachlorobenzene: **RMDL = 0.010 ug/L**
Candidate parameter for Boise Cascade (Fort Frances), CPFP (Dryden), and CPFP (Thunder Bay). Classified as frequent high, frequent low and frequent low, respectively. No problems with the QA/QC data.

CONCLUSION: **Data appear to be of reliable quality, but there are concerns with the contract laboratory that performed the sample analyses. The OFIA Interlaboratory Study (September, 1991) reports that split sample analysis by two other contract laboratories did not detect this parameter in 5 out of 6 samples and notes that the contract laboratory that performed the analyses for these mills had analytical difficulties in analyzing for this parameter. A review of Ministry audit data confirms the absence of this parameter in the effluent. Remove from the candidate parameter list.**

1,2,4-Trichlorobenzene: **RMDL = 0.010 ug/L**
Unique candidate parameter for Malette. Classified as frequent low. No problem with travelling blanks or recoveries. The average difference between the duplicate and effluent samples is 1.0 * RMDL whereas the average effluent level is 1.4 * RMDL.

CONCLUSION: **Data appear to be of limited quality and should be used carefully.**

2,4,5-Trichlorotoluene: **RMDL = 0.010 ug/L**
Candidate parameter for Boise Cascade (Fort Frances), CPFP (Dryden), CPFP (Thunder Bay) and Malette. Classified as frequent high at all but Malette, which is classified as frequent low. No problems with travelling blanks and recoveries. Average difference between the duplicate and effluent samples for Boise Cascade is 73.2 * RMDL, whereas its average effluent level is 83.3 * RMDL. Average difference between the duplicate and effluent samples for CPFP (Dryden) is 36.1 * RMDL, whereas its average effluent level is 41.3 * RMDL. Malette has one value of 0.0.

CONCLUSION: **Data for all but CPFP (Thunder Bay) appear highly suspect and unreliable and should not be used for limit setting. Data for CPFP (Thunder Bay) should be used with caution due to concerns with the contract laboratory that performed the sample analyses. The OFIA Interlaboratory Study (September, 1991) notes that the contract laboratory that performed the analyses for this mill had analytical difficulties in analyzing for this parameter.**

A review of Ministry audit data confirms the absence of this parameter in the effluent of Boise Cascade, CPFP (Dryden) and CPFP (Thunder Bay). Remove from the candidate parameter list for Boise Cascade, CPFP (Dryden) and CPFP (Thunder Bay).

Hexachlorobenzene: RMDL = 0.010 ug/L
Candidate parameter for Boise Cascade (Fort Frances), CPFP (Dryden) and CPFP (Thunder Bay). Classified as frequent high, frequent low and frequent high, respectively. No problems with the QA/QC data.
CONCLUSION: **Data appear to be of reliable quality, but there are concerns with the contract laboratory that performed the sample analyses. The OFIA Interlaboratory Study (September, 1991) reports that split sample analysis by two other contract laboratories did not detect this parameter in the effluent and notes that the contract laboratory that performed the analyses for these mills had analytical difficulties in analyzing for this parameter. A review of Ministry audit data confirms the absence of this parameter in the effluent. Remove from the candidate parameter list.**

Hexachlorobutadiene: RMDL = 0.010 ug/L
Candidate parameter for CPFP (Dryden) and CPFP (Thunder Bay). Classified as frequent medium and frequent low, respectively. No problems with travelling blanks and duplicate ratios. Recovery low for both CPFP mills (15 & 17%).
CONCLUSION: **Data appear to be of reliable quality, but there are concerns with the contract laboratory that performed the sample analyses. The OFIA Interlaboratory Study (September, 1991) reports that split sample analysis by two other contract laboratories did not detect this parameter in the effluent and notes that the contract laboratory that performed the analyses for these mills had analytical difficulties in analyzing for this parameter. A review of Ministry audit data confirms the absence of this parameter in the effluent. Remove from the candidate parameter list.**

Hexachlorocyclopentadiene: RMDL = 0.010 ug/L
Unique candidate parameter for Boise Cascade (Fort Frances). Classified as frequent low. No problem with travelling blanks. Recovery very low (8%). Average difference between the duplicate and effluent samples is 4.8 * RMDL, whereas its average effluent level is 6.1 * RMDL.

CONCLUSION: **Data appear highly suspect and unreliable and should not be used for limit setting. Concerns also exist with the contract laboratory that performed the sample analyses for this parameter for this mill. Based on the well documented and known instability of this compound in the aqueous environment, it has been deleted from further consideration in the MISA program.**

Hexachloroethane: RMDL = 0.010 ug/L
Unique candidate parameter for CPFP (Thunder Bay). Classified as frequent low. No problem with travelling blank and duplicate samples. Recovery very low (19%).

CONCLUSION: **Data appear to be of limited quality and should be used with caution. Concerns also exist with the contract laboratory that performed the sample analyses. The OFIA Interlaboratory Study (September, 1991) notes that the contract laboratory that performed the analyses for this mill had analytical difficulties in analyzing for this parameter. A review of Ministry audit data confirms the absence of this parameter in the effluent. Remove from the candidate parameter list.**

Octachlorostyrene: RMDL = 0.010 ug/L
Candidate parameter for Boise Cascade (Fort Frances), CPFP (Dryden) and CPFP (Thunder Bay). Classified as frequent low, frequent high and frequent medium, respectively. No problem with travelling blanks or recovery. Average difference between duplicate and effluent samples for Boise Cascade is 10.9 * RMDL whereas the average effluent level is 3.0 * RMDL.

CONCLUSION: **Data for Boise Cascade appear highly suspect and unreliable and should not be used for limit setting. Data for CPFP (Dryden) and (Thunder Bay) appear to be of reliable quality, but there are concerns with the contract laboratory that performed the sample analyses. The OFIA Interlaboratory Study (September, 1991) reports that split sample analysis by two other contract laboratories did not detect this parameter in the effluent and notes that the contract laboratory that performed the analyses for these mills had**

analytical difficulties in analyzing for this parameter. A review of Ministry audit data confirms the absence of this parameter in the effluent. Remove from the candidate parameter list.

Pentachlorobenzene: RMDL = 0.010 ug/L
Candidate parameter for Boise Cascade (Fort Frances) and CPFP (Dryden). Classified as frequent low and frequent medium, respectively. No problems with the QA/QC data.
CONCLUSION: **Data appear to be of reliable quality, but there are concerns with the contract laboratory that performed the sample analyses. The OFIA Interlaboratory Study (September, 1991) reports that split sample analysis by two other contract laboratories did not detect this parameter in the effluent and notes that the contract laboratory that performed the analyses for these mills had analytical difficulties in analyzing for this parameter. A review of Ministry audit data confirms the absence of this parameter in the effluent. Remove from the candidate parameter list.**

ATG 24:

2,3,7,8 TCDD: RMDL = 0.020 ng/L
Unique candidate parameter for Kimberly-Clark (Terrace Bay). Classified as frequent low. No problems with the QA/QC data. Candidate parameter for Kimberly-Clark because 5 of 12 records have the MDL greater than RMDL (only 3 actual detections greater than the RMDL).
CONCLUSION: **Keep on the candidate parameter list because the MDL is greater than 1.6 * RMDL.**

Octachlorodibenzo-p-dioxin: RMDL = 0.030 ng/L
Candidate parameter for Boise Cascade (Fort Frances), CPFP (Thunder Bay), Domtar (Cornwall), Domtar (Red Rock), James River-Marathon and Kimberly-Clark (Terrace Bay). Classified as infrequent low, infrequent medium, frequent medium, frequent high, frequent high and frequent medium, respectively. Detected in travelling blanks for James River-Marathon (5.0 * RMDL) and Kimberly-Clark (1.9 * RMDL), whereas average effluent levels are 14.0 * RMDL and 10.2 * RMDL, respectively. Average difference between duplicate and effluent samples is 6.3 * RMDL for James River-Marathon.
CONCLUSION: **Data are of reliable quality.**

Octachlorodibenzofuran: RMDL = 0.030 ng/L
Candidate parameter for James River-Marathon and Kimberly-Clark (Terrace Bay). Classified as infrequent high and frequent low, respectively. No problems with the QA/QC data. Candidate parameter for Kimberly-Clark because the MDL (0.060 ng/L) is greater than the RMDL. James River-Marathon has 3 actual detections and 1 record of .170 '<DL'.
CONCLUSION: Data for James River are of reliable quality. Keep as a candidate parameter for Kimberly-Clark because the MDL is greater than 1.6 * RMDL.

Total H6CDD: RMDL = 0.030 ng/L
Unique candidate parameter for Kimberly-Clark (Terrace Bay). Classified as frequent low. No problems with the QA/QC data. Candidate parameter for Kimberly-Clark because its MDL (0.060 ng/L) is greater than the RMDL.
CONCLUSION: Keep on the candidate parameter list because the MDL is greater than 1.6 * RMDL.

Total H6CDF: RMDL = 0.020 ng/L
Unique candidate parameter for James River-Marathon. Classified as infrequent high. No problems with the QA/QC data.
CONCLUSION: Data are of reliable quality.

Total H7CDD: RMDL = 0.030 ng/L
Unique candidate parameter for James River-Marathon. Classified as frequent low. No problems with the travelling blanks. Average difference between duplicate and effluent samples is approximately the same as the effluent ratios themselves.
CONCLUSION: Data appear to be of limited quality and should be used carefully.

Total H7CDF: RMDL = 0.030 ng/L
Unique candidate parameter for Kimberly-Clark (Terrace Bay). Classified as frequent low. No problems with the QA/QC data. Candidate parameter for Kimberly-Clark because MDL (0.040 ng/L) is greater than RMDL for 6 of 12 records.
CONCLUSION: Remove from the candidate parameter list because the MDL is less than 1.6 * RMDL.

Total PCDD: RMDL = 0.020 ng/L
Candidate parameter for James River-Marathon and Kimberly-Clark (Terrace Bay). Classified as frequent low and frequent medium, respectively. No problems with the QA/QC data.
CONCLUSION: Data are of reliable quality.

Total PCDF: **RMDL = 0.015 ng/L**
Candidate parameter for James River-Marathon and Kimberly-Clark (Terrace Bay). Classified as frequent medium and frequent low, respectively. No problems with the QA/QC data.
CONCLUSION: **Data are of reliable quality.**

Total TCDD: **RMDL = 0.020 ng/L**
Candidate parameter for James River-Marathon and Kimberly-Clark (Terrace Bay). Classified as frequent low and frequent high, respectively. No problems with the QA/QC data.
CONCLUSION: **Data are of reliable quality.**

Total TCDF: **RMDL = 0.015 ng/L**
Candidate parameter for all Sulphate (Kraft) mills except Domtar (Red Rock). Generally classified as frequent high, though CPFP (Dryden) and Domtar (Cornwall) are classified as frequent medium, and CPFP (Thunder Bay) and E.B. Eddy are classified as frequent low. Average difference between duplicate and effluent samples for Malette is 19.5 * RMDL whereas the average effluent level is 10.5 * RMDL.
CONCLUSION: **Data for all but Malette are of reliable quality. Data for Malette appear highly unreliable and should not be used for limit setting.**

ATG 26:

Abietic Acid: **RMDL = 0.005 mg/L**
Candidate parameter for all Sulphate (Kraft) mills except E.B. Eddy (Espanola). Classified as frequent high at all mills except Boise Cascade, CPFP (Dryden) and Kimberly-Clark, which are classified as frequent low. No problem with travelling blank samples. The average effluent levels are greater than the average differences between duplicate and effluent samples.
CONCLUSION: **Data are of reliable quality.**

Chlorodehydroabietic Acid: **RMDL = 0.005 mg/L**
Candidate parameter for Boise Cascade (Fort Frances), CPFP (Dryden), CPFP (Thunder Bay), Domtar (Cornwall), James River-Marathon, Kimberly Clark (Terrace Bay), and Malette. Generally classified as frequent high except at Kimberly-Clark, which is classified as infrequent low. Detected in travelling blanks for Boise Cascade (9.0 * RMDL) and CPFP (Thunder Bay) (4.4 * RMDL), but average effluent levels are 19.6 * RMDL and 61.8 * RMDL, respectively. Boise (Fort Frances) has an extraordinarily high recovery. The average effluent levels are greater than the average differences between duplicate and effluent samples.

CONCLUSION: **Data for Boise (Fort Frances) are of limited quality and should be used carefully. Data for all other mills are of reliable quality.**

Dehydroabietic Acid: **RMDL = 0.005 mg/L**
Candidate parameter for all 9 mills. Generally classified as frequent high, but infrequent high at E.B. Eddy and infrequent medium at Kimberly-Clark. Detected in travelling blanks for Boise Cascade (Fort Frances) (2.0 * RMDL) and CPFP (Thunder Bay) (2.2 * RMDL), but average effluent levels are 80.4 * RMDL and 357.8 * RMDL, respectively. The average effluent levels are greater than the average differences between duplicate and effluent samples.
CONCLUSION: **Data are of reliable quality.**

Isopimaric Acid: **RMDL = 0.005 mg/L**
Candidate parameter for Boise Cascade (Fort Frances), CPFP (Dryden), CPFP (Thunder Bay), Domtar (Cornwall), Domtar (Red Rock), James River-Marathon and Malette. Classified as frequent high at all but CPFP (Dryden) and Domtar (Cornwall). No problems with travelling blank samples. Recovery low at Domtar (Red Rock) (28%). Average difference between duplicate and effluent samples for CPFP (Dryden) is 2.0 * RMDL whereas the average effluent level is 2.4 * RMDL.
CONCLUSION: **Data for Domtar (Red Rock) appear to be of limited quality and should be used carefully. Data for CPFP (Dryden) appear highly suspect and unreliable and should not be used for limit setting.**

Levopimaric Acid: **RMDL = 0.005 mg/L**
Candidate parameter for Boise Cascade (Fort Frances), CPFP (Dryden), CPFP (Thunder Bay), Domtar (Cornwall), James River-Marathon, and Malette. Classified as frequent medium, infrequent low, frequent low, frequent low, frequent high, and frequent low, respectively. No problems with the QA/QC data.
CONCLUSION: **Data are of reliable quality.**

Neoabietic Acid: **RMDL = 0.005 mg/L**
Candidate parameter for Boise Cascade (Fort Frances), CPFP (Dryden), CPFP (Thunder Bay), Domtar (Cornwall), Domtar (Red Rock), James River-Marathon and Malette. Classified as frequent high at CPFP (Thunder Bay), Domtar (Cornwall) and Domtar (Red Rock), frequent medium at James River, and frequent low at the other three mills. No problem with travelling blank samples. Average difference between duplicate and effluent samples for CPFP (Dryden) is 2.0 * RMDL whereas the average effluent level is 2.2 * RMDL.

CONCLUSION: **Data for all but CPFP (Dryden) are of reliable quality. Data for CPFP (Dryden) appear to be of limited quality and should be used carefully.**

Oleic Acid: RMDL = 0.005 mg/L
Candidate parameter for Boise Cascade (Fort Frances), CPFP (Dryden), CPFP (Thunder Bay), Domtar (Cornwall), Domtar (Red Rock), James River-Marathon, and Kimberly-Clark (Terrace Bay). Generally classified as frequent high, but CPFP (Dryden) classified as frequent medium and Kimberly-Clark as infrequent medium. No problem with travelling blank samples. The average effluent levels are greater than the average differences between duplicate and effluent samples.
CONCLUSION: **Data are of reliable quality.**

Pimaric Acid: RMDL = 0.005 mg/L
Candidate parameter for Boise Cascade (Fort Frances), CPFP (Dryden), CPFP (Thunder Bay), Domtar (Cornwall), Domtar (Red Rock), James River-Marathon and Malette. Generally classified as frequent high, but James River classified as frequent medium and CPFP (Dryden) and Domtar (Cornwall) classified as frequent low. The average difference between the duplicate and effluent samples is 1.5 * RMDL for CPFP (Dryden) whereas the average effluent level is 1.8 * RMDL.
CONCLUSION: **Data for all but CPFP (Dryden) are of reliable quality. Data for CPFP (Dryden) appear highly suspect and unreliable and should not be used for limit setting.**

ATG PP2:

AOX: RMDL = 0.050 mg/L
Candidate parameter for all 9 kraft mills. Consistently classified as frequent high. Average differences between duplicate and effluent samples for Boise Cascade (Fort Frances), CPFP (Dryden), CPFP (Thunder Bay), Domtar (Cornwall), E.B. Eddy (Espanola), James River-Marathon, Kimberly-Clark (Terrace Bay) and Malette are high, but average effluent levels are much higher.
CONCLUSION: **Data are of reliable quality.**

ATG PP3:

Dichlorodehydroabietic Acid: RMDL = 0.005 mg/L
Candidate parameter for all kraft mills except E.B. Eddy (Espanola). Generally classified as frequent high, but infrequent high at Domtar (Cornwall) and (Red Rock), frequent medium at James River and infrequent medium at Kimberly-Clark (Terrace Bay). No problems with travelling blanks or recoveries. Average differences between duplicate and effluent samples for Boise Cascade and CPFP (Thunder Bay) are high, but average effluent levels are higher.
CONCLUSION: Data are of reliable quality.

SULPHITE/MECHANICAL SUBCATEGORY

ATG 9:

Aluminum: **RMDL = 30 ug/L**
Candidate parameter for all 8 mills. Consistently classified as frequent high. No problems with travelling blank samples and recoveries. Average differences between duplicate and effluent samples are high for all mills except Spruce Falls. Average effluent levels are much higher than the average differences between duplicate and effluent samples.
CONCLUSION: **Data are of reliable quality.**

Copper: **RMDL = 10 ug/L**
Candidate parameter for all Sulphite-Mechanical mills except Abitibi-Price (Provincial Papers) and Abitibi-Price (Thunder Bay). Generally classified as frequent low, but Abitibi-Price (Iroquois Falls) and Spruce Falls classified as frequent medium. No problems with the QA/QC data.
CONCLUSION: **Data are of reliable quality.**

Zinc: **RMDL = 10 ug/L**
Candidate parameter for all 8 mills. Generally classified as frequent high, but frequent medium at Abitibi-Price (Fort William) (0100) and Abitibi-Price (Provincial Papers). Detected in travelling blanks for Spruce Falls (6 * RMDL), though the average effluent level is 11.7 * RMDL. The average effluent levels are greater than the average differences between duplicate and effluent samples.
CONCLUSION: **Data are of reliable quality. Data for Spruce Falls may be of lower quality.**

ATG 16:

1,2-Dichloroethane: **RMDL = 0.80 ug/L**
Candidate parameter for Abitibi-Price (Iroquois Falls), Abitibi-Price (Fort William), Abitibi-Price (Provincial Papers), Abitibi-Price (Thunder Bay), Quebec & Ontario and St. Marys. Candidate parameter for these mills because MDL's (0.82 ug/L) are greater than RMDL.
CONCLUSION: **Remove from the candidate parameter list because the MDL is less than 1.6 * RMDL.**

Bromodichloromethane: **RMDL = 0.80 ug/L**
Unique candidate parameter for Boise Cascade (Kenora). Candidate parameter for Boise Cascade because their MDL is greater than RMDL.
CONCLUSION: **Remove from the candidate parameter list because the MDL is less than 1.6 * RMDL.**

Chloroform: **RMDL = 0.70 ug/L**
Candidate parameter for all 8 mills. Generally classified as frequent high, but frequent medium at Abitibi-Price (Thunder Bay) and frequent low at Quebec & Ontario and St. Marys. Detected in travelling blanks for Abitibi-Price (Iroquois Falls) and Abitibi-Price (Provincial Papers), but average effluent levels are much higher. No problem with recoveries. Average differences between duplicate and effluent samples is 16.9 * RMDL for Fort William whereas the average effluent level is 36.4 * RMDL.
CONCLUSION: **Data for all mills but Abitibi-Price (Ft. William) are of reliable quality. Data for Abitibi-Price (Ft. William) appear to be of limited quality and should be used carefully.**

Chloromethane: **RMDL = 3.7 ug/L**
Unique candidate parameter for St. Marys. Classified as infrequent medium. Average recovery for St. Marys is 288%.
CONCLUSION: **Data appear to be of limited quality and should be used carefully.**

Methylene Chloride: **RMDL = 1.30 ug/L**
Candidate parameter for Abitibi-Price (Iroquois Falls), Abitibi-Price (Fort William), Abitibi-Price (Provincial Papers), Abitibi-Price (Thunder Bay), Quebec & Ontario and St. Marys. Generally classified as frequent medium, but frequent low at Abitibi-Price (Thunder Bay) and Quebec & Ontario. Detected in travelling blanks for Abitibi-Price (Thunder Bay) (104.2 * RMDL) and St. Marys (1.4 * RMDL), whereas their average effluent levels are 2.5 * RMDL and 18.8 * RMDL, respectively. Recovery low for Quebec & Ontario. Average differences between duplicate and effluent samples are generally significantly higher than average effluent levels.
CONCLUSION: **Data appear highly suspect and unreliable and should not be used for limit setting. The data from the Pre-Regulation and MISA Monitoring Programs show the apparent presence of this contaminant in both intake water and process effluents and in a non-uniform pattern. This is suggestive of an artifact occurrence phenomenon. Remove from the candidate parameter list.**

ATG 17:

Benzene: **RMDL = 0.50 ug/L**
Candidate parameter for Abitibi-Price (Iroquois Falls), Abitibi-Price (Provincial Papers), Abitibi-Price (Thunder Bay) and St. Marys. Classified as frequent low, frequent low, infrequent high and frequent medium. No problems with travelling blank samples. Recovery low for Abitibi-Price (Provincial Papers) (36%) and St. Marys (37%). Average differences between duplicate and effluent samples are high for Abitibi-Price (Iroquois Falls) (7.7 * RMDL), Abitibi-Price (Thunder Bay) (2.9 * RMDL) and St. Marys (1.4 * RMDL), compared with their average effluent levels of 3.6 * RMDL, 3.8 * RMDL, and 2.7 * RMDL, respectively.
CONCLUSION: **Data for Abitibi-Price (Iroquois Falls) and (Thunder Bay) and St. Marys appear highly suspect and unreliable and should not be used for limit setting. Data for Abitibi-Price (Provincial Papers) appear to be of limited quality and should be used carefully.**

Styrene: **RMDL = 0.50 ug/L**
Unique candidate parameter for Abitibi-Price (Provincial Papers). Classified as frequent low. No problems with the QA/QC data.
CONCLUSION: **Data are of reliable quality.**

Toluene: **RMDL = 0.50 ug/L**
Candidate parameter for all Sulphite-Mechanical mills except Boise Cascade (Kenora). Most classified as frequent low, St. Marys classified as frequent medium and Abitibi-Price (Ft. William) and Spruce Falls classified as frequent high. No problems with travelling blanks and recoveries. The average differences between the duplicate and effluent samples are 3.3 * RMDL for St. Marys and 19.6 * RMDL for Abitibi-Price (Iroquois Falls), whereas the average effluent levels are 5.6 * RMDL and 1.1 * RMDL, respectively.
CONCLUSION: **Data for all but Abitibi-Price (Iroquois Falls) and St. Marys are of reliable quality. Data for Abitibi-Price (Iroquois Falls) and St. Marys appear highly suspect and unreliable and should not be used for limit setting.**

o-Xylene: **RMDL = 0.50 ug/L**
Candidate parameter for Abitibi-Price (Fort William) (0200) and Abitibi-Price (Provincial Papers). Both classified as infrequent low. No problems with the QA/QC data.
CONCLUSION: **Data are of reliable quality.**

ATG 19:

Benzo(g,h,i)perylene: RMDL = 0.70 ug/L
Unique candidate parameter for Boise Cascade (Kenora). Candidate parameter for Boise Cascade because their MDL is greater than the RMDL.
CONCLUSION: The MDL is greater than 1.6*RMDL, however, this parameter was not detected above the MDL during the first eleven months of monitoring nor in the final month of monitoring when the MDL was less than the RMDL. A review of Ministry audit data confirms the absence of this parameter in the effluent. Remove from the candidate parameter list.

Benzo(k)fluoranthene: RMDL = 0.70 ug/L
Unique candidate parameter for Boise Cascade (Kenora). Candidate parameter for Boise Cascade because their MDL is greater than the RMDL.
CONCLUSION: Remove from the candidate parameter list because the MDL is less than 1.6 * RMDL.

Camphene: RMDL = 3.5 ug/L
Candidate parameter for Abitibi-Price (Iroquois Falls) and Abitibi-Price (Fort William) (0200). Both classified as frequent low. No problems with the QA/QC data.
CONCLUSION: Data are of reliable quality.

Dibenz(a,h)anthracene: RMDL = 1.3 ug/L
Unique candidate parameter for Boise Cascade (Kenora). Candidate parameter for Boise Cascade because their MDL is greater than the RMDL.
CONCLUSION: Remove from the candidate parameter list because the MDL is less than 1.6 * RMDL.

ATG 20:

Phenol: RMDL = 2.40 ug/L
Candidate parameter for Abitibi-Price (Iroquois Falls), Abitibi-Price (Fort William), Abitibi-Price (Thunder Bay), St. Marys and Spruce Falls. Generally classified as frequent low, though classified as frequent high at Abitibi-Price (Ft. William) and infrequent low at Spruce Falls. No problems with travelling blank or duplicate samples. Recovery low for Abitibi-Price (Fort William) (36%).
CONCLUSION: Data for all but Abitibi-Price (Ft. William) are of reliable quality. Data for Abitibi-Price (Ft. William) appear to be of limited quality and should be used carefully.

m-Cresol: **RMDL = 3.40 ug/L**
Candidate parameter for Abitibi-Price (Iroquois Falls), Abitibi-Price (Fort William) and Abitibi-Price (Thunder Bay). Generally classified as frequent low, but classified as frequent high at Abitibi-Price (Ft. William) (0200). No problems with the QA/QC data.
CONCLUSION: **Data are of reliable quality.**

p-Cresol: **RMDL = 3.50 ug/L**
Candidate parameter for Abitibi-Price (Fort William), Abitibi-Price (Thunder Bay) and St. Marys. Classified as frequent low/frequent high (Abitibi-Price (Ft. William) (0100/0200), infrequent low and frequent low, respectively. No problems with the QA/QC data.
CONCLUSION: **Data are of reliable quality.**

ATG 23:

1,2,3-Trichlorobenzene: **RMDL = 0.010 ug/L**
Unique candidate parameter for Boise Cascade (Kenora). Classified as frequent high. No problem with travelling blank samples. Recovery low (34%). Average difference between duplicate and effluent samples is 5.7 * RMDL, and the average effluent level is 9.1 * RMDL.
CONCLUSION: **Data appear to be of reliable quality, but there are concerns with the contract laboratory that performed the sample analyses. The OFIA Interlaboratory Study (September, 1991) notes that the contract laboratory that performed the analyses for this mill had analytical difficulties in analyzing for this parameter. A review of Ministry audit data confirms the absence of this parameter in the effluent. Remove from the candidate parameter list.**

1,2,4-Trichlorobenzene: **RMDL = 0.10 ug/L**
Unique candidate parameter for Boise Cascade (Kenora). Classified as frequent high. No problem with travelling blank samples. Recovery low (39%). Average difference between duplicate and effluent samples is 6.5 * RMDL, and the average effluent level is 6.6 * RMDL.
CONCLUSION: **Data appear highly suspect and unreliable and should not be used for limit setting. Concerns also exist with the contract laboratory that performed the sample analyses. The OFIA Interlaboratory Study (September, 1991) notes that the contract laboratory that performed the analyses for this mill had analytical difficulties in analyzing for this parameter. A review of**

Ministry audit data confirms the absence of this parameter in the effluent. Remove from the candidate parameter list.

2,4,5-Trichlorotoluene: RMDL = 0.010 ug/L
Unique candidate parameter for Boise Cascade (Kenora). Classified as frequent high. No problems with travelling blank samples. Recovery low (31%). Average difference between duplicate and effluent samples is 28.4 * RMDL, whereas the average effluent level is 36.6 * RMDL.
CONCLUSION: Data appear highly suspect and unreliable and should not be used for limit setting. Concerns also exist with the contract laboratory that performed the sample analyses. The OFIA Interlaboratory Study (September, 1991) notes that the contract laboratory that performed the analyses for this mill had analytical difficulties in analyzing for this parameter. A review of Ministry audit data confirms the absence of this parameter in the effluent. Remove from the candidate parameter list.

Pentachlorobenzene: RMDL = 0.010 ug/L
Unique candidate parameter for Boise Cascade (Kenora). Classified as infrequent medium. No problems with the QA/QC data.
CONCLUSION: Data appear to be of reliable quality, but there are concerns with the contract laboratory that performed the sample analyses. The OFIA Interlaboratory Study (September, 1991) notes that the contract laboratory that performed the analyses for this mill had analytical difficulties in analyzing for this parameter. A review of Ministry audit data confirms the absence of this parameter in the effluent. Remove from the candidate parameter list.

ATG 24:

Octachlorodibenzo-p-dioxin: RMDL = 0.030 ng/L
Candidate parameter for Abitibi-Price (Fort William), Abitibi-Price (Thunder Bay), Boise Cascade (Kenora), St. Marys and Spruce Falls. Generally classified as frequent medium, but Abitibi-Price (Thunder Bay) classified as frequent low and Spruce Falls classified as frequent high. No problems with travelling blank samples. Average difference between duplicate and effluent samples is high for Abitibi-Price (Thunder Bay) (208.4 * RMDL), whereas the average effluent level is 52.7 * RMDL.

CONCLUSION: **Data for all but Abitibi-Price (Thunder Bay) are of reliable quality. Data for Abitibi-Price (Thunder Bay) appear highly suspect and unreliable and should not be used for limit setting.**

Octachlorodibenzofuran: RMDL = 0.030 ng/L
Unique candidate parameter for Abitibi-Price (Iroquois Falls). Classified as frequent low. No QA/QC data.
CONCLUSION: **Data are of reliable quality.**

ATG 26:

Abietic Acid: RMDL = 0.005 ug/L
Candidate parameter for all Sulphite-Mechanical mills except Quebec & Ontario. Classified as frequent high at all but Abitibi-Price (Provincial Papers) which is classified as frequent low. Detected in travelling blanks for Boise Cascade (Kenora) and Spruce Falls, but average effluent levels are much greater. No problem with recoveries. Average differences between duplicate and effluent samples are high, but average effluent levels are much higher.
CONCLUSION: **Data are of reliable quality.**

Chlorodehydroabietic Acid: RMDL = 0.005 ug/L
Candidate parameter for Boise Cascade (Kenora) and Spruce Falls. Classified as frequent high and frequent low, respectively. Detected in travelling blanks, but at levels much lower than the average effluent levels. No problems with recoveries. Average difference between duplicate and effluent samples is high for Boise Cascade, but average effluent level is much greater.
CONCLUSION: **The two mills identified do not use chlorine for bleaching. Therefore the presence of this parameter is suspect. Laboratory studies have shown that there are problems with the analysis because of possible co-eluting interferences with phthalate esters. Data are of limited quality and should be used carefully.**

Dehydroabietic Acid: RMDL = 0.005 ug/L
Candidate parameter for all 8 mills. Classified as frequent high at all but Quebec & Ontario, which is classified as infrequent medium. Detected in travelling blanks for most mills, but average effluent levels are much greater. Average differences between duplicate and effluent samples are high, but average effluent levels are much higher. No problems with recoveries.
CONCLUSION: **Data are of reliable quality.**

Isopimaric Acid: RMDL = 0.005 ug/L
Candidate parameter for all Sulphite-Mechanical mills except Quebec & Ontario. Consistently classified as frequent high. No problem with travelling blanks and recoveries. Average differences between duplicate and effluent samples are high, but average effluent levels much higher.
CONCLUSION: Data are of reliable quality.

Levopimaric Acid: RMDL = 0.005 ug/L
Candidate parameter for Abitibi-Price (Iroquois Falls), Abitibi-Price (Fort William), Abitibi-Price (Thunder Bay), Boise Cascade (Kenora) and St. Marys. Generally classified as frequent high, but Boise Cascade classified as frequent low. No problems with travelling blanks and recoveries. Average differences between the duplicate and effluent samples are high, but the average effluent levels are much greater.
CONCLUSION: Data are of reliable quality.

Neoabietic Acid: RMDL = 0.005 ug/L
Candidate parameter for Abitibi-Price (Iroquois Falls), Abitibi-Price (Fort William), Abitibi-Price (Thunder Bay), Boise Cascade (Kenora), St. Marys and Spruce Falls. Consistently classified as frequent high. No problems with recoveries. Average differences between duplicate and effluent samples are high, but average effluent levels are higher. Detected in travelling blanks for Abitibi-Price (Fort William), but average effluent level is much higher.
CONCLUSION: Data are of reliable quality.

Oleic Acid: RMDL = 0.005 ug/L
Candidate parameter for Abitibi-Price (Iroquois Falls), Abitibi-Price (Fort William), Abitibi-Price (Thunder Bay), Boise Cascade (Kenora), St. Marys and Spruce Falls. Classified as frequent high at all but St. Marys, which is classified as frequent medium. No problems with travelling blanks and recoveries. Average differences between duplicate and effluent samples are high, but average effluent levels are higher.
CONCLUSION: Data are of reliable quality.

Pimaric Acid: RMDL = 0.005 ug/L
Candidate parameter for all Sulphite-Mechanical mills except Quebec & Ontario. Generally classified as frequent high, but classified as frequent low at Abitibi-Price (Provincial Papers). No problems with travelling blanks and recoveries. Average differences between duplicate and effluent samples are high, but average effluent levels are higher.
CONCLUSION: Data are of reliable quality.

CORRUGATING SUBCATEGORY

ATG 9:

Aluminum: RMDL = 30 ug/L
Candidate parameter for both mills. Consistently classified as frequent high. No problems with the QA/QC data.
CONCLUSION: Data for Domtar (Trenton) are of reliable quality. Data for MacMillan Bloedel are not suitable for use in the development of limits because of concerns with their contract laboratory.

Cadmium: RMDL = 2.0 ug/L
Candidate parameter for both mills. Classified as frequent low for Domtar and frequent high for MacMillan. No problems with the QA/QC data.
CONCLUSION: Data for Domtar (Trenton) are of reliable quality.

Chromium: RMDL = 20 ug/L
Candidate parameter for both mills. Classified as infrequent low for Domtar and infrequent medium/frequent low for MacMillan (1200/1300). No problems with recoveries. The average difference between the duplicate and effluent samples is 1.3 * RMDL for MacMillan (1200), but the average effluent level is 1.5 * RMDL. Detected in travelling blanks for MacMillan (1300) at 1.4 * RMDL, whereas the average effluent level is 1.5 * RMDL.
CONCLUSION: Data for Domtar (Trenton) are of reliable quality. Data for MacMillan Bloedel appear highly suspect and unreliable and should not be used for limit setting. Also, data for MacMillan Bloedel are not suitable for use in the development of limits because of concerns with their contract laboratory.

Cobalt: RMDL = 20 ug/L
Unique candidate parameter for MacMillan. Classified as frequent medium (1200) and frequent low (1300). No problems with the QA/QC data.
CONCLUSION: Data for MacMillan Bloedel are not suitable for use in the development of limits because of concerns with their contract laboratory.

Copper: RMDL = RMDL = 10 ug/L
Candidate parameter for both mills. Classified as frequent medium (Domtar) and frequent medium/frequent high for MacMillan (1200/1300). No problems with duplicate ratios or recoveries. Detected in travelling blanks for MacMillan at 6.0 and 6.4 * RMDL whereas the effluent is 4.3 and 6.2 * RMDL.
CONCLUSION: Data for Domtar (Trenton) are of reliable quality. Data for MacMillan Bloedel appear highly suspect and unreliable and should not be used for limit setting. Also, data for MacMillan Bloedel are not suitable for use in the development of limits because of concerns with their contract laboratory.

Lead: RMDL = 30 ug/L
Unique candidate parameter for MacMillan. Classified as frequent medium (1200) and frequent low (1300). No problems with the QA/QC data.
CONCLUSION: Data for MacMillan Bloedel are not suitable for use in the development of limits because of concerns with their contract laboratory.

Molybdenum: RMDL = 20 ug/L
Unique candidate parameter for MacMillan (1300). Classified as frequent low. No problems with the QA/QC data.
CONCLUSION: Data for MacMillan Bloedel are not suitable for use in the development of limits because of concerns with their contract laboratory.

Nickel: RMDL = 20 ug/L
Unique candidate parameter for MacMillan. Classified as frequent medium (1200) and frequent low (1300). No problems with the QA/QC data.
CONCLUSION: Data for MacMillan Bloedel are not suitable for use in the development of limits because of concerns with their contract laboratory.

Thallium: RMDL = 20 ug/L
Unique candidate parameter for MacMillan. Classified as frequent low. The average difference between the effluent and duplicate samples is 1.0 * RMDL for MacMillan (1300) whereas the average effluent level is 1.8 * RMDL.
CONCLUSION: Data may be of limited quality and should be used carefully. Also, data for MacMillan Bloedel are not suitable for use in the development of limits because of concerns with their contract laboratory.

Vanadium: RMDL = 30 ug/L
Unique candidate parameter for MacMillan. Classified as frequent low. The average travelling blank levels for control points 1200 and 1300 are 2.5 * RMDL and 1.9 * RMDL, whereas the average effluent levels are 2.3 * RMDL and 1.8 * RMDL, respectively.
CONCLUSION: Data are highly suspect and unreliable. Vanadium should be removed as a candidate parameter for limits in the Corrugating Subcategory.

Zinc: RMDL = 10 ug/L
Candidate parameter for both mills. Consistently classified as frequent high. No problems with the QA/QC data. Significant amounts have been detected in travelling blanks for MacMillan (1300), however, the average effluent levels are much greater.
CONCLUSION: Data for Domtar (Trenton) are of reliable quality. Data for MacMillan Bloedel are not suitable for use in the development of limits because of concerns with their contract laboratory.

ATG 16:

Chloroform: RMDL = 0.70 ug/L
Unique candidate parameter for Domtar. Classified as frequent medium. No problems with the QA/QC data. Five of the 12 records contain the '<WE' remark code.
CONCLUSION: Data are of reliable quality.

ATG 20:

Phenol: RMDL = 2.40 ug/L
Unique candidate parameter for Domtar. Classified as frequent high. No problems with the travelling blank samples or recoveries. The average effluent level is greater than the average difference between the duplicate and effluent samples.
CONCLUSION: Data are of reliable quality.

o-Cresol: RMDL = 3.70 ug/L
Unique candidate parameter for Domtar. Classified as frequent medium. No problems with the QA/QC data.
CONCLUSION: Data are of reliable quality.

ATG 24:

Octachlordibenzo-p-dioxin: RMDL = .03 ng/L
Unique candidate parameter for Domtar. Classified as frequent high. No QA/QC data.
CONCLUSION: Data are of reliable quality.

Octachlordibenzofuran: RMDL = .03 ng/L
Unique candidate parameter for Domtar. Classified as frequent high. No QA/QC data.
CONCLUSION: Data are of reliable quality.

Total H6CDD: RMDL = .03 ng/L
Unique candidate parameter for Domtar. Classified as frequent high. No QA/QC data.
CONCLUSION: Data are of reliable quality.

Total H7CDD: RMDL = .03 ng/L
Unique candidate parameter for Domtar. Classified as frequent high. No QA/QC data.
CONCLUSION: Data are of reliable quality.

Total H7CDF: RMDL = .03 ng/L
Unique candidate parameter for Domtar. Classified as frequent high. No QA/QC data.
CONCLUSION: Data are of reliable quality.

Total TCDF: RMDL = .015 ng/L
Unique candidate parameter for Domtar. Classified as frequent medium. No QA/QC data.
CONCLUSION: Data are of reliable quality.

ATG 26:

Abietic Acid: RMDL = 0.005 mg/L
Unique candidate parameter for Domtar. Classified as frequent high. No problems with the QA/QC data.
CONCLUSION: Data are of reliable quality.

Chlorodehydroabietic Acid: RMDL = 0.005 mg/L
Candidate parameter for both mills. Classified as frequent medium (Domtar) and frequent high/infrequent high (MacMillan Bloedel (1200/1300)). No problems with the travelling blank samples or recoveries. The average difference between the duplicate and effluent data is 29.8 * RMDL for MacMillan (1300) whereas the average effluent level is 6.8 * RMDL.
CONCLUSION: The two mills identified do not use chlorine for bleaching. Therefore the presence of this parameter is suspect. Laboratory studies have shown that there are problems with the analysis because of possible co-

eluting interferences with phthalate esters. Data are of limited quality and should be used carefully. Also, data for MacMillan Bloedel are not suitable for use in the development of limits because of concerns with their contract laboratory.

Dehydroabietic Acid: RMDL = 0.005 mg/L
Candidate parameter for both mills. Consistently classified as frequent high. No problems with the QA/QC data.
CONCLUSION: **Data for Domtar (Trenton) are of reliable quality. Data for MacMillan Bloedel are not suitable for use in the development of limits because of concerns with their contract laboratory.**

Isopimaric Acid: RMDL = 0.005 mg/L
Candidate parameter for both mills. Consistently classified as frequent high. No problems with the QA/QC data.
CONCLUSION: **Data for Domtar (Trenton) are of reliable quality. Data for MacMillan Bloedel are not suitable for use in the development of limits because of concerns with their contract laboratory.**

Levopimaric Acid: RMDL = 0.005 mg/L
Unique candidate parameter for MacMillan. Classified as frequent high. No problems with the QA/QC data. Not a candidate parameter for Domtar because 9 of 12 records contained the 'I' remark code.
CONCLUSION: **Data for MacMillan Bloedel are not suitable for use in the development of limits because of concerns with their contract laboratory.**

Neoabietic Acid: RMDL = 0.005 mg/L
Candidate parameter for Domtar and MacMillan (1200). Classified as frequent high (Domtar) and frequent low (MacMillan). No problems with the travelling blank samples or recoveries. The average difference between the duplicate and effluent data is 13.7 * RMDL for MacMillan (1200) whereas the average effluent level is 15.8 * RMDL.
CONCLUSION: **Data for Domtar are of reliable quality. Data for MacMillan appear highly suspect and unreliable and should not be used for limit setting. Also, data for MacMillan Bloedel are not suitable for use in the development of limits because of concerns with their contract laboratory.**

Oleic Acid: **RMDL = 0.005 mg/L**
Candidate parameter for both mills. Classified as frequent high (Domtar) and frequent medium/frequent high (MacMillan (1200/1300)). No problems with the QA/QC data.
CONCLUSION: **Data for Domtar (Trenton) are of reliable quality. Data for MacMillan Bloedel are not suitable for use in the development of limits because of concerns with their contract laboratory.**

Pimaric Acid: **RMDL = 0.005 mg/L**
Candidate parameter for both mills. Consistently classified as frequent high. No problems with the QA/QC data.
CONCLUSION: **Data for Domtar (Trenton) are of reliable quality. Data for MacMillan Bloedel are not suitable for use in the development of limits because of concerns with their contract laboratory.**

DEINKING/BOARD/FINE PAPERS/TISSUE SUBCATEGORY

ATG 9:

Aluminum: RMDL = 30 ug/L
Candidate parameter for all 8 mills. Generally classified as frequent high, but Kimberly-Clark (Huntsville) classified as frequent low and Kimberly-Clark (St. Catharines) classified as frequent medium. The average effluent levels are greater than the average difference between the duplicate and effluent samples.
CONCLUSION: Data are of reliable quality.

Chromium: RMDL = 20 ug/L
Unique candidate parameter for Trent Valley. Classified as infrequent low. No problems with the QA/QC data.
CONCLUSION: Data are of reliable quality.

Copper: RMDL = 10 ug/L
Candidate parameter for Beaver Wood, Domtar (St. Catharines), Eddy (Ottawa), Kimberly-Clark (Huntsville), Noranda, and Trent Valley. Generally classified as frequent low, but Beaver Wood and Domtar both classified as infrequent low. Detected in travelling blanks for Beaver Wood at a level higher than the average effluent level.
CONCLUSION: Data for all mills except Beaver Wood are of reliable quality. Data for Beaver Wood appear highly suspect and unreliable and should not be used for limit setting.

Zinc: RMDL = 10 ug/L
Candidate parameter for all 8 mills. Classified as frequent high at Noranda and Trent Valley, classified as frequent medium at Beaver Wood and Kimberly-Clark (St. Catharines) and frequent low at all the rest. Detected in travelling blanks for Beaver Wood (14.2 * RMDL), Domtar (St. Catharines) (1.9 * RMDL) and Strathcona (4.2 * RMDL). No problems with duplicate samples or recoveries.
CONCLUSION: Data for all mills except Beaver Wood, Domtar and Strathcona are of reliable quality. Data for Beaver Wood, Domtar and Strathcona appear highly suspect and unreliable and should not be used for limit setting.

ATG 16:

1,1-Dichloroethane: RMDL = 0.8 ug/L
Candidate parameter for Kimberly-Clark (St. Catharines) and Trent Valley. Classified as frequent low. No problems with the travelling blank samples or recoveries. Average difference between duplicate and effluent samples is high (13.9 * RMDL) for Trent Valley, whereas its average effluent level is 11 * RMDL.
CONCLUSION: Data for Kimberly-Clark are of reliable quality. Data for Trent Valley appear highly suspect and unreliable and should not be used for limit setting.

1,1-Dichloroethylene: RMDL = 2.8 ug/L
Candidate parameter for Beaver Wood and Trent Valley. Classified as frequent low and frequent medium, respectively. No problems with the travelling blank samples. Recovery low for Beaver Wood (37%). The average differences between the duplicate and effluent samples are 1.5 * RMDL for Beaver Wood and 10.9 * RMDL for Trent Valley, whereas the average effluent levels are 2.0 * RMDL and 161.3 * RMDL, respectively.
CONCLUSION: Data for Trent Valley are of reliable quality. Data for Beaver Wood appear highly suspect and unreliable and should not be used for limit setting.

1,2-Dichloroethane: RMDL = 0.8 ug/L
Candidate parameter for E.B. Eddy (Ottawa), Noranda, Strathcona, and Trent Valley. Candidate parameter for all four mills because their MDL's are greater than the RMDL.
CONCLUSION: Remove from the candidate parameter list because their MDL's are less than 1.6 * RMDL.

Bromodichloromethane: RMDL = 0.8 ug/L
Unique candidate parameter for Noranda. Classified as frequent high. No problems with the QA/QC data.
CONCLUSION: Data are of reliable quality.

Chloroform: RMDL = 0.7 ug/L
Candidate parameter for all mills in this subcategory except for Beaver Wood and Kimberly Clark (St. Catharines). Classified as frequent low (Domtar and Strathcona), frequent medium (E.B. Eddy and Kimberly-Clark (Huntsville)), frequent high (Noranda) and infrequent medium (Trent Valley). No problems with the travelling blank samples or with the recoveries. However, Strathcona has an average difference between the duplicate and effluent samples of 6.5 * RMDL

whereas its average effluent level is 3.4 * RMDL. Very high corrections are made for Noranda.

CONCLUSION: **Data for all but Strathcona and Noranda are of reliable quality. Data for Strathcona appear highly suspect and unreliable and should not be used for limit setting. Data for Noranda should be used with caution.**

Dibromochloromethane: RMDL = 1.10 mg/L
Unique candidate parameter for Noranda. Classified as frequent low. No problems with the QA/QC data.
CONCLUSION: **Data are of reliable quality.**

Methylene Chloride: RMDL = 1.3 ug/L
Candidate parameter for Beaver Wood, Domtar (St. Catharines), Kimberly-Clark (St. Catharines), Strathcona and Trent Valley. Generally classified as frequent low, but classified as infrequent medium at Beaver Wood and infrequent high at Trent Valley. Detected in travelling blanks for Domtar and Strathcona but levels are much higher in the effluent. The travelling blank levels at Trent Valley are comparable to the process effluent. The average differences between the duplicate and effluent samples are 3.2 * RMDL for Beaver Wood, 9.6 * RMDL for Domtar and 38.6 * RMDL for Strathcona, whereas their average effluent levels are 1.5 * RMDL, 8.6 * RMDL and 32.9 * RMDL, respectively.
CONCLUSION: **Data for Kimberly-Clark appear to be of reliable quality. Data for Trent Valley are of lower quality. All other data appear highly suspect and unreliable and should not be used for limit setting. The data from the Pre-Regulation and MISA Monitoring Programs show the apparent presence of this contaminant in both intake water and process effluents and in a non-uniform pattern. This is suggestive of an artifact occurrence phenomenon. Remove from the candidate parameter list.**

Tetrachloroethylene: RMDL = 1.1 ug/L
Unique candidate parameters for Kimberly-Clark (St. Catharines). Both parameters are classified as frequent low. No problems with the QA/QC data.
CONCLUSION: **Data are of reliable quality.**

Trichloroethylene: RMDL = 1.9 ug/L
Unique candidate parameters for Kimberly-Clark (St. Catharines). Both parameters are classified as frequent low. No problems with the QA/QC data.
CONCLUSION: **Data are of reliable quality.**

ATG 17:

Benzene: RMDL = 0.5 ug/L
Candidate parameter for Beaver Wood, Domtar (St. Catharines), Noranda and Trent Valley. Generally classified as infrequent high, but frequent low at Noranda. Detected in travelling blanks for Noranda (3.0 * RMDL), whereas its average effluent level is 4.4 * RMDL. No problems with recoveries. Average difference between duplicate and effluent samples is 1.1 * RMDL for Beaver Wood, whereas its average effluent level is 1.5 * RMDL.
CONCLUSION: **Data for Domtar and Trent Valley are of reliable quality. Data for Beaver Wood and Noranda appear highly suspect and unreliable and should not be used for limit setting.**

Toluene: RMDL = 0.5 ug/L
Candidate parameter for Beaver Wood, Kimberly-Clark (St. Catharines), Strathcona, and Trent Valley. Classified as frequent high, frequent medium, frequent low and frequent medium, respectively. No problems with the QA/QC data.
CONCLUSION: **Data are of reliable quality.**

m-Xylene and p-Xylene: RMDL = 1.1 ug/L
Candidate parameter for Beaver Wood and Noranda. Classified as frequent low. No problems with travelling blank samples or recoveries. Average difference between duplicate and effluent samples is 1.1 * RMDL for Beaver Wood, whereas its average effluent level is 0.9 * RMDL.
CONCLUSION: **Data for Noranda are of reliable quality. Data for Beaver Wood appear highly suspect and unreliable and should not be used for limit setting.**

o-Xylene: RMDL = 0.5 ug/L
Candidate parameter for Beaver Wood and Noranda. Consistently classified as frequent low. No problems with the QA/QC data.
CONCLUSION: **Data are of reliable quality.**

ATG 19:

2-Methylnaphthalene: RMDL = 2.2 ug/L
Unique candidate parameter for Kimberly-Clark (St. Catharines). Classified as frequent low. No problems with the QA/QC data.
CONCLUSION: **Data are of reliable quality.**

Naphthalene: **RMDL = 1.6 ug/L**
Candidate parameter for E.B. Eddy (Ottawa), Kimberly-Clark (St. Catharines) and Trent Valley. Classified as frequent low at E.B. Eddy and Kimberly-Clark, and infrequent low at Trent Valley. No problems with the QA/QC data.
CONCLUSION: **Data are of reliable quality.**

ATG 20:

Pentachlorophenol: **RMDL = 1.3 ug/L**
Unique candidate parameter for Trent Valley. Classified as infrequent low. No problems with the QA/QC data.
CONCLUSION: **Data are of reliable quality.**

Phenol: **RMDL = 2.4 ug/L**
Candidate parameter for Beaver Wood, Kimberly-Clark (St. Catharines), Strathcona, and Trent Valley. Classified as frequent low at Kimberly-Clark and Strathcona, as frequent medium at Beaver Wood, and as frequent high at Trent Valley. No problems with travelling blank samples or with recoveries. Average differences between the duplicate and effluent samples are 3.1 * RMDL for Strathcona and 11.9 for Trent Valley, whereas their average effluent levels are 3.2 * RMDL and 24.7 * RMDL, respectively.
CONCLUSION: **Data for all but Strathcona are of reliable quality. Data for Strathcona appear highly suspect and unreliable and should not be used for limit setting.**

m-Cresol: **RMDL = 3.4 ug/L**
Candidate parameter for Strathcona and Trent Valley. Classified as frequent low and frequent medium, respectively. No problems with travelling blank samples and recoveries. The average difference between the duplicate and effluent samples is 2.2 * RMDL for the Trent Valley mill whereas its average effluent level is 3.9 * RMDL.
CONCLUSION: **Data for Strathcona are of reliable quality. Data for Trent Valley appear to be of limited quality and should be used carefully.**

p-Cresol: **RMDL = 3.5 ug/L**
Unique candidate parameter for Strathcona. Classified as frequent low. No problems with travelling blank samples and recoveries. The average difference between the duplicate and effluent samples is 7.1 * RMDL whereas its average effluent level is 4.7 * RMDL.
CONCLUSION: **Data appear highly suspect and unreliable and should not be used for limit setting.**

ATG 23:

1,2,3,4-Tetrachlorobenzene: RMDL = 0.010 ug/L
Unique candidate parameter for E.B. Eddy (Ottawa). Classified as infrequent low. No problems with the QA/QC data.
CONCLUSION: **Data are of reliable quality.**

1,2,3-Trichlorobenzene: RMDL = 0.010 ug/L
Unique candidate parameter for E.B. Eddy (Ottawa). Classified as infrequent low. No problems with the QA/QC data.
CONCLUSION: **Data are of reliable quality.**

1,2,4-Trichlorobenzene: RMDL = .01 ug/L
Unique candidate parameter for E.B. Eddy (Ottawa). Classified as frequent low. No problems with travelling blank samples and recoveries. The average difference between the duplicate and effluent samples is 1.3 * RMDL whereas its average effluent level is 2.3 * RMDL.
CONCLUSION: **Data appear to be of limited quality and should be used carefully.**

Hexachlorocyclopentadiene: RMDL = .01 ug/L
Unique candidate parameter for Noranda. Classified as frequent high. No problems with travelling blank samples or recoveries. Average difference between duplicate and effluent samples is 17.1 * RMDL, whereas its average effluent level is 17.3 * RMDL.
CONCLUSION: **Data appear highly suspect and unreliable and should not be used for limit setting. Based on the well documented and known instability of this compound in the aqueous environment, it has been deleted from further consideration in the MISA program.**

ATG 24:

Octachlorodibenzo-p-dioxin: RMDL = .03 ng/L
Candidate parameter for Beaver Wood, Domtar (St. Catharines), Kimberly-Clark (Huntsville), and Noranda. Classified as frequent low, frequent medium, frequent medium and frequent low, respectively. No problems with travelling blank samples. Average difference between duplicate and effluent samples is 32.3 * RMDL for Kimberly-Clark (Huntsville), whereas its average effluent level is 6.7 * RMDL. Candidate parameter for Domtar because its MDL is greater than the RMDL.
CONCLUSION: **Data for Beaver Wood and Noranda are of reliable quality. Remove as a candidate parameter for Domtar because the MDL is less**

than 1.6 * RMDL. Data for Kimberly-Clark appear highly suspect and unreliable and should not be used for limit setting.

Total H6CDF: RMDL = .02 ng/L
Unique candidate parameter for Domtar (St. Catharines). Candidate parameter for Domtar because the MDL is .022 ng/L.
CONCLUSION: Remove from the candidate parameter list because the MDL is less than 1.6 * RMDL.

Total TCDF: RMDL = .015 ng/L
Unique candidate parameter for Kimberly-Clark (St. Catharines). Classified as frequent low. No problems with the QA/QC data.
CONCLUSION: Data are of reliable quality.

ATG 26:

Abietic Acid: RMDL = .005 mg/L
Candidate parameter for Beaver Wood, Domtar (St. Catharines), E.B. Eddy (Ottawa), Kimberly-Clark (St. Catharines), and Trent Valley. Classified as frequent high at Beaver Wood and Domtar, frequent medium at Trent Valley and frequent low at E.B. Eddy and Kimberly-Clark. No problems with the travelling blank samples or recoveries. The average differences between the duplicate and effluent samples are 29.6 * RMDL for Beaver Wood, 8.8 * RMDL for Domtar (St. Catharines), 9.7 * RMDL for E.B. Eddy (Ottawa) and 4.0 * RMDL for Trent Valley, whereas their respective average effluent levels are 21.4 * RMDL, 28.8 * RMDL, 8.6 * RMDL and 10.4 * RMDL.
CONCLUSION: Data for Domtar, Kimberly-Clark and Trent Valley are of reliable quality. Data for Beaver Wood and E.B. Eddy appear highly suspect and unreliable and should not be used for limit setting.

Chlorodehydroabietic Acid: RMDL = 0.005 mg/L
Candidate parameter for Domtar (St. Catharines) and Trent Valley. Classified as frequent low and infrequent medium. Detected in travelling blanks for Trent Valley (1.6 * RMDL) and the average difference between duplicate and effluent samples is 2.4 * RMDL. Trent Valley's average effluent level is 1.8 * RMDL.
CONCLUSION: The two mills identified do not use chlorine for bleaching. Therefore the presence of this parameter is suspect. Laboratory studies have shown that there are problems

with the analysis because of possible co-eluting interferences with phthalate esters. Data are of limited quality and should be used carefully.

Dehydroabietic Acid: RMDL = .005 mg/L
Candidate parameter for all mills except Kimberly-Clark (Huntsville). Consistently classified as frequent high. No problems with the travelling blank samples or recoveries. The average differences between the duplicate and effluent samples are high, but the average effluent levels are much higher.
CONCLUSION: Data are of reliable quality.

Isopimaric Acid: RMDL = .005 mg/L
Candidate parameter for Beaver Wood, Domtar (St. Catharines), Kimberly-Clark (St. Catharines) and Trent Valley. Generally classified as frequent high, but Kimberly-Clark classified as frequent low. No problems with the travelling blank samples or recoveries. The average differences between the duplicate and effluent samples are high, but the average effluent levels are higher.
CONCLUSION: Data are of reliable quality.

Levopimaric Acid: RMDL = 0.005 mg/L
Candidate parameter for Beaver Wood, Domtar (St. Catharines) and Kimberly-Clark (St. Catharines). Classified as frequent low, frequent medium, and infrequent high, respectively. No problems with recoveries. Average differences between duplicate and effluent samples are generally high, but the average effluent levels are higher. Detected in travelling blanks for Beaver Wood at 13.4 * RMDL, whereas its average effluent level is 12.6 * RMDL.
CONCLUSION: Data for all but Beaver Wood are of reliable quality. Data for Beaver Wood appear highly suspect and unreliable and should not be used for limit setting.

Neoabietic Acid: RMDL = 0.005 mg/L
Unique candidate parameter for Beaver Wood. Classified as infrequent medium. No problems with travelling blank samples or recoveries. Average difference between duplicate and effluent samples is 2.8 * RMDL, whereas its average effluent level is 4.2 * RMDL.
CONCLUSION: Data appear to be of limited quality and should be used carefully.

Oleic Acid: RMDL = 0.005 mg/L
Candidate parameter for Beaver Wood, Kimberly-Clark (St. Catharines), Strathcona and Trent Valley. Generally classified as frequent low, but frequent high at Kimberly-Clark (St. Catharines). No problems with travelling blank

samples or recoveries. Average differences between duplicate and effluent samples are high: 18.7 * RMDL for Beaver Wood, 550.4 * RMDL for Kimberly-Clark, 11.1 * RMDL for Strathcona and 5.6 * RMDL for Trent Valley, whereas their respective average effluent levels are 15.2 * RMDL, 296.2 * RMDL, 8 * RMDL and 9.2 * RMDL.
CONCLUSION: **Data for Trent Valley are of reliable quality. Data for the other three mills appear highly suspect and unreliable and should not be used for limit setting.**

Pimaric Acid: RMDL = .005 mg/L
Candidate parameter for Beaver Wood, Domtar (St. Catharines), E.B. Eddy (Ottawa), Kimberly-Clark (St. Catharines), Strathcona and Trent Valley. Classified as frequent medium, frequent low, infrequent medium, frequent low, infrequent high and frequent low, respectively. No problems with the travelling blank samples or recoveries. The average differences between the duplicate and effluent samples are 3.2 * RMDL for Beaver Wood, 1.7 * RMDL for E.B. Eddy, 9.6 * RMDL for Strathcona and 2.4 * RMDL for Trent Valley, whereas their average effluent ratios are 7.2 * RMDL, 2.4 * RMDL, 5.8 * RMDL and 2 * RMDL, respectively.
CONCLUSION: **Data for all but E.B. Eddy and Trent Valley are of reliable quality. Data for E.B. Eddy and Trent Valley appear highly suspect and unreliable and should not be used for limit setting.**

ATG PP2:

AOX: RMDL = .05 mg/L
Unique candidate parameter for Noranda only (all other mills in this subcategory did not monitor AOX). Classified as frequent high. No QA/QC data.
CONCLUSION: **Data are of reliable quality.**

APPENDIX F

Detection Frequencies and Concentration Ratios for Candidate Parameters Monitored Daily and Thrice-weekly in Process Effluent

APPENDIX F

Detection Frequencies and Concentration
Ratios for Candidate Parameters Monitored
Daily and Thrice-weekly in Process Effluent

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS MONITORED DAILY AND THRICE-WEEKLY IN PROCESS EFFLUENT

Table 1.1 ABITIBI-PRICE INC., IROQUOIS FALLS DIVISION

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION >RMDL	>2RMDL	>5RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
BOD, 5 day, Total Demand	142	100	100	100	24.00	241.40	154.80
DOC	334	100	100	100	50.00	2,720.00	1,477.23
Dehydroabietic Acid	140	100	100	100	90.00	1,460.00	815.40
Specific conductance	334	100	100	100	30.20	278.00	214.47
Total suspended solids	334	100	100	100	7.20	76.80	23.87

Table 1.2a ABITIBI-PRICE INC., FORT WILLIAM DIVISION
Control Point 0100

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION >RMDL	>2RMDL	>5RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
BOD, 5 day, Total Demand	143	100	100	100	21.60	137.80	88.44
DOC	332	100	100	100	186.00	1,440.00	715.23
Specific conductance	331	100	100	100	59.40	278.20	181.70
Total suspended solids	332	100	100	70	1.20	35.60	6.22
Dehydroabietic Acid	144	99	99	99	.00	1,540.00	734.00

Table 1.2b ABITIBI-PRICE INC., FORT WILLIAM DIVISION
Control Point 0200

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION >RMDL	>2RMDL	>5RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
BOD, 5 day, Total Demand	144	100	100	100	52.00	257.60	154.83
DOC	332	100	100	100	152.00	1,860.00	1,093.20
Dehydroabietic Acid	145	100	100	100	20.00	3,380.00	1,309.60
Specific conductance	331	100	100	100	64.80	434.00	250.38
Total suspended solids	332	100	100	100	8.00	50.20	24.96

Table 1.3 ABITIBI-PRICE INC., PROVINCIAL PAPERS DIVISION

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION >RMDL	>2RMDL	>5RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
BOD, 5 day, Total Demand	134	100	100	100	6.00	30.40	17.96
DOC	314	100	100	100	17.20	500.00	123.11
Specific conductance	314	100	100	100	21.20	117.00	68.42
Total suspended solids	311	100	98	62	.80	24.80	6.69
Dehydroabietic Acid	136	98	98	98	.60	520.00	92.00

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS MONITORED DAILY AND THRICE-WEEKLY IN PROCESS EFFLUENT (cont'd)

Table 1.4 ABITIBI-PRICE INC., THUNDER BAY DIVISION

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
BOD, 5 day, Total Demand	144	100	100	100	12.80	173.20	120.66
DOC	326	100	100	100	132.00	1,940.00	1,214.84
Dehydroabietic Acid	142	100	100	100	52.00	980.00	335.00
Specific conductance	331	100	100	100	40.80	191.60	138.98
Total suspended solids	331	100	100	97	1.60	15.00	7.97

Table 1.5 BEAVER WOOD FIBRE COMPANY

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
BOD, 5 day, Total Demand	137	100	100	100	11.00	40.00	24.63
DOC	259	100	100	100	9.40	288.00	136.86
Specific conductance	259	100	100	100	62.00	92.00	75.93
Total suspended solids	258	100	100	96	.68	18.80	9.06

Table 1.6 BOISE CASCADE CANADA LTD., FORT FRANCES

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
Adsorbable Organic Halide	158	100	100	100	99.00	746.60	491.20
BOD, 5 day, Total Demand	157	100	100	100	6.74	59.80	23.80
COD	362	100	100	100	19.40	134.60	74.59
Specific conductance	363	100	100	100	170.00	385.00	323.09
Total suspended solids	364	100	100	100	11.00	53.60	27.16
Dehydroabietic Acid	149	94	94	91	1.00	307.00	80.40
Dichlorodehydroabietic Ac.	148	93	91	89	1.00	67.20	28.40

Table 1.7 BOISE CASCADE CANADA LTD., KENORA

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
BOD, 5 day, Total Demand	154	100	100	100	6.20	206.20	130.24
COD	356	100	100	100	12.00	304.80	195.28
Specific conductance	361	100	100	100	28.00	292.00	194.13
Total suspended solids	362	100	100	100	2.80	26.00	13.24
Dehydroabietic Acid	145	99	99	99	1.00	1,786.00	858.20

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS MONITORED DAILY AND THRICE-WEEKLY IN PROCESS EFFLUENT (cont'd)

Table 1.8 CANADIAN PACIFIC FOREST PRODUCTS LTD., DRYDEN

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION >RMDL	>2RMDL	>5RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Adsorbable Organic Halide	158	100	100	100	26.40	781.00	432.42
COD	360	100	100	100	20.00	77.00	53.33
Specific conductance	360	100	100	100	172.00	548.00	345.61
Total suspended solids	360	100	100	98	3.20	21.92	11.20
BOD, 5 day, Total Demand	158	100	99	77	1.60	13.00	6.21
Dehydroabietic Acid	159	97	91	51	.20	559.40	13.40
Dichlorodehydroabietic Ac.	158	97	89	60	.60	35.00	12.40

Table 1.9 CANADIAN PACIFIC FOREST PRODUCTS LTD., THUNDER BAY

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION >RMDL	>2RMDL	>5RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Adsorbable Organic Halide	131	100	100	100	31.60	1,163.40	478.12
COD	279	100	100	100	11.40	187.50	97.52
Dehydroabietic Acid	120	100	100	100	61.60	1,692.40	357.80
Specific conductance	281	100	100	100	60.00	484.00	313.06
Total suspended solids	281	100	100	100	6.56	80.96	17.37
BOD, 5 day, Total Demand	121	100	100	99	4.80	99.60	55.37
Dichlorodehydroabietic Ac.	119	99	99	82	1.00	168.80	12.40

Table 1.10 DOMTAR INC., FINE PAPERS DIVISION (CORNWALL)

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION >RMDL	>2RMDL	>5RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
BOD, 5 day, Total Demand	151	100	100	100	11.40	51.20	32.45
COD	355	100	100	100	18.50	85.50	46.74
Dehydroabietic Acid	155	100	100	100	33.20	251.60	92.40
Specific conductance	355	100	100	100	96.20	294.40	217.98
Total suspended solids	353	100	100	100	7.80	30.40	15.13
Adsorbable Organic Halide	155	99	99	96	.80	118.00	66.16
Dichlorodehydroabietic Ac.	155	30	28	18	1.00	25.00	2.80

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS MONITORED DAILY AND THRICE-WEEKLY IN PROCESS EFFLUENT (cont'd)

Table 1.11 DOMTAR INC., CONTAINERBOARD DIVISION (RED ROCK)

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION >RMDL	FREQUENCY OF DETECTION >2RMDL	FREQUENCY OF DETECTION >5RMDL	CONCENTRATION RATIOS (1) MINIMUM	CONCENTRATION RATIOS (1) MAXIMUM	CONCENTRATION RATIOS (1) AVERAGE
BOD, 5 day, Total Demand	157	100	100	100	17.80	47.00	31.58
COD	358	100	100	100	7.00	93.50	42.33
Dehydroabietic Acid	144	100	100	100	73.80	495.80	228.40
Specific conductance	361	100	100	100	6.60	420.00	135.41
Total suspended solids	361	100	100	100	5.20	47.40	12.43
Adsorbable Organic Halide	144	99	99	98	.80	72.00	35.52
Dichlorodehydroabietic Ac.	143	20	17	14	1.00	134.00	3.60

Table 1.12 DOMTAR INC., FINE PAPERS DIVISION (ST. CATHARINES)

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION >RMDL	FREQUENCY OF DETECTION >2RMDL	FREQUENCY OF DETECTION >5RMDL	CONCENTRATION RATIOS (1) MINIMUM	CONCENTRATION RATIOS (1) MAXIMUM	CONCENTRATION RATIOS (1) AVERAGE
BOD, 5 day, Total Demand	158	100	100	100	5.60	96.00	20.16
COD	354	100	100	100	2.40	3,400.00	83.47
Specific conductance	356	100	100	100	40.00	122.22	78.25
Total suspended solids	356	99	94	56	.60	176.00	7.50

Table 1.13 DOMTAR INC., CONTAINERBOARD DIVISION (TRENTON)

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION >RMDL	FREQUENCY OF DETECTION >2RMDL	FREQUENCY OF DETECTION >5RMDL	CONCENTRATION RATIOS (1) MINIMUM	CONCENTRATION RATIOS (1) MAXIMUM	CONCENTRATION RATIOS (1) AVERAGE
BOD, 5 day, Total Demand	150	100	100	100	70.00	570.00	255.74
COD	355	100	100	100	114.20	660.00	297.82
Dehydroabietic Acid	157	100	100	100	63.40	547.80	233.80
Specific conductance	355	100	100	100	106.40	490.00	219.29
Total suspended solids	355	100	100	100	8.00	140.00	31.41

Table 1.14 E.B. EDDY FOREST PRODUCTS LTD., ESPANOLA

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION >RMDL	FREQUENCY OF DETECTION >2RMDL	FREQUENCY OF DETECTION >5RMDL	CONCENTRATION RATIOS (1) MINIMUM	CONCENTRATION RATIOS (1) MAXIMUM	CONCENTRATION RATIOS (1) AVERAGE
Adsorbable Organic Halide	152	100	100	100	24.40	330.00	163.92
DOC	359	100	100	100	18.38	362.00	229.32
Specific conductance	359	100	100	100	26.40	454.00	293.96
BOD, 5 day, Total Demand	164	98	78	10	.60	15.60	3.46
Total suspended solids	359	95	89	44	.10	13.20	4.99
Dehydroabietic Acid	167	38	33	20	.60	114.00	4.00
Dichlorodehydroabietic Ac.	167	3	2	1	.80	5.40	.80

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS MONITORED DAILY AND THRICE-WEEKLY IN PROCESS EFFLUENT (cont'd)

Table 1.15 E.B. EDDY FOREST PRODUCTS LTD., OTTAWA

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
BOD, 5 day, Total Demand	156	100	100	100	7.00	75.60	31.32
COD	329	100	100	100	9.40	63.50	36.92
Specific conductance	329	100	100	100	33.80	143.00	72.63
Total suspended solids	329	100	100	96	3.34	75.42	12.21

Table 1.16 JAMES RIVER-MARATHON LTD.

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
Adsorbable Organic Halide	157	100	100	100	15.80	9,221.00	899.46
BOD, 5 day, Total Demand	155	100	100	100	14.40	56.80	40.09
COD	347	100	100	100	22.20	110.40	77.08
Specific conductance	347	100	100	100	106.00	840.00	431.82
Total suspended solids	347	100	100	99	4.20	31.60	8.84
Dehydroabietic Acid	155	99	97	78	.20	54.20	9.80
Dichlorodehydroabietic Ac.	156	99	87	49	.60	99.00	8.40

Table 1.17 KIMBERLY-CLARK CANADA INC., HUNTSVILLE

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
Specific conductance	170	100	100	100	82.80	118.00	98.54
COD	169	100	100	96	2.20	28.80	7.97
BOD, 5 day, Total Demand	67	22	9	3	.10	181.80	4.04
Total suspended solids	170	11	2	0	1.00	2.40	1.07

Table 1.18 KIMBERLY-CLARK CANADA INC., ST. CATHARINES

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
Specific conductance	341	100	100	100	58.00	125.60	77.91
COD	315	100	100	95	3.10	23.50	12.35
BOD, 5 day, Total Demand	145	100	97	72	1.30	15.20	7.56
Total suspended solids	342	65	27	0	.10	4.40	1.51

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS MONITORED DAILY AND THRICE-WEEKLY IN PROCESS EFFLUENT (cont'd)

Table 1.19 KIMBERLY-CLARK CANADA INC., TERRACE BAY

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION >RMDL	>2RMDL	>5RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Adsorbable Organic Halide	157	100	100	100	244.00	588.00	424.62
COD	364	100	100	100	10.40	177.44	52.51
Specific conductance	364	100	100	100	200.00	540.00	379.16
Total suspended solids	364	100	100	97	2.80	15.20	8.50
BOD, 5 day, Total Demand	156	99	74	13	.94	8.52	3.14
Dehydroabietic Acid	156	38	22	10	1.00	25.00	2.20
Dichlorodehydroabietic Ac.	156	17	16	5	1.00	9.20	1.60

Table 1.20a MACMILLAN BLOEDEL LTD.
Control Point 1200

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION >RMDL	>2RMDL	>5RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
BOD, 5 day, Total Demand	150	100	100	100	39.80	1,056.00	662.58
DOC	341	100	100	100	194.00	13,000.000	6,581.03
Specific conductance	341	100	100	100	34.00	1,504.00	564.94
Total suspended solids	341	100	100	99	.80	125.00	19.61
Dehydroabietic Acid	123	79	78	67	1.00	637.40	31.20

Table 1.20b MACMILLAN BLOEDEL LTD.
Control Point 1300

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION >RMDL	>2RMDL	>5RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
BOD, 5 day, Total Demand	149	100	100	100	68.00	621.20	296.50
DOC	343	100	100	100	1,080.00	5,560.00	3,145.25
Specific conductance	343	100	100	100	80.00	952.00	336.08
Total suspended solids	343	100	100	100	17.40	237.60	71.82
Dehydroabietic Acid	126	83	81	71	1.00	1,094.20	43.80

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS MONITORED DAILY AND THRICE-WEEKLY IN PROCESS EFFLUENT (cont'd)

Table 1.21 MALETTE KRAFT PULP AND POWER

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
BOD, 5 day, Total Demand	145	100	100	100	12.80	96.00	31.19
Specific conductance	342	100	100	100	66.00	824.00	326.95
Adsorbable Organic Halide	148	100	100	99	2.00	1,300.00	454.60
COD	342	100	100	96	2.00	600.00	60.57
Dehydroabietic Acid	145	99	99	99	.60	1,320.00	112.00
Total suspended solids	342	99	99	79	.10	25.00	6.79
Dichlorodehydroabietic Ac.	145	97	97	93	.80	144.00	24.40

Table 1.22 NORANDA FOREST INC., RECYCLED PAPERS

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
BOD, 5 day, Total Demand	326	100	100	100	10.00	84.00	31.18
DOC	322	100	100	100	72.00	296.00	155.01
Specific conductance	325	100	100	100	19.60	282.00	184.77
Total suspended solids	324	100	100	97	2.60	102.08	14.30

Table 1.23 QUEBEC AND ONTARIO PAPER COMPANY LTD.

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
DOC	226	100	100	100	7.00	96.00	58.67
Specific conductance	229	100	100	100	73.80	242.00	138.98
Total suspended solids	231	100	100	96	2.00	65.20	10.01
BOD, 5 day, Total Demand	99	100	98	29	1.60	14.00	4.44
Dehydroabietic Acid	97	36	32	15	.60	740.00	16.20

Table 1.24 ST. MARYS PAPER INC.

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
BOD, 5 day, Total Demand	150	100	100	100	7.32	88.00	39.51
COD	357	100	100	100	4.50	280.00	61.07
Specific conductance	358	100	100	100	4.40	101.10	56.86
Dehydroabietic Acid	149	100	100	99	4.40	2,400.00	428.40
Total suspended solids	362	100	100	99	4.00	121.20	33.56

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS MONITORED DAILY AND THRICE-WEEKLY IN PROCESS EFFLUENT (cont'd)

Table 1.25 SPRUCE FALLS POWER AND PAPER COMPANY LTD.

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION >RMDL	>2RMDL	>5RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
BOD, 5 day, Total Demand	158	100	100	100	45.00	216.00	84.93
COD	356	100	100	100	36.00	190.00	85.21
Dehydroabietic Acid	158	100	100	100	189.40	823.40	426.80
Conductivity, average	359	100	100	100	24.80	98.20	56.74
Total suspended solids	356	100	100	100	7.00	70.40	17.39

Table 1.26 STRATHCONA PAPER COMPANY

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION >RMDL	>2RMDL	>5RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
COD	355	100	100	100	16.00	80.00	43.45
Specific conductance	355	100	100	100	120.00	159.20	141.82
Total suspended solids	355	100	100	99	4.20	31.00	12.90
BOD, 5 day, Total Demand	150	100	100	95	3.80	62.00	21.32

Table 1.27 TRENT VALLEY DIVISION (PAPERBOARD INDUSTRIES CORP.)

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION >RMDL	>2RMDL	>5RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
BOD, 5 day, Total Demand	153	100	100	100	13.80	160.00	83.04
COD	355	100	100	100	49.00	286.80	92.50
Specific conductance	335	100	100	100	90.40	260.00	166.59
Total suspended solids	358	100	100	100	5.00	181.80	27.66

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

APPENDIX G

Detection Frequencies and Concentration Ratios for Candidate Parameters Monitored Weekly, Monthly, Bi-Monthly and Semi-Annually in Process Effluent

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR SULPHITE/MECHANICAL SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.1 ABITIBI-PRICE INC., IROQUOIS FALLS DIVISION

	NUMBER OF	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
PARAMETER	OBSERVATIONS	>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
Aluminum	48	100	100	98	2.50	183.33	97.59
Zinc	48	98	90	88	.10	270.00	18.73
Abietic Acid	11	100	100	100	12.60	880.00	480.80
Total Kjeldahl nitrogen	11	100	100	100	5.60	11.60	6.89
Neoabietic Acid	11	100	100	91	3.40	168.00	64.60
Total phosphorus	11	100	100	82	4.70	18.50	8.05
Copper	11	100	64	9	1.00	11.30	3.09
Chloroform	11	91	91	91	.79	97.14	25.45
Isopimaric Acid	11	91	91	91	.80	820.00	360.60
Pimaric Acid	11	91	91	91	.60	144.00	64.00
Phenol	11	82	0	0	.16	1.75	1.18
Oleic Acid	11	73	73	73	.60	42.00	15.20
Levopimaric Acid	11	73	73	64	.80	152.00	42.80
Methylene chloride	11	64	55	18	.71	7.38	2.75
Camphene	11	55	27	0	.10	3.63	1.52
Toluene	11	55	9	0	.48	2.70	1.13
m-Cresol	11	55	0	0	.13	1.62	.81
Benzene	11	45	45	27	.38	13.80	3.61
1,2-Dichloroethane	11	45	0	0	.64	1.02	.81
Nitrate+Nitrite	11	36	0	0	.28	1.44	.93
Chloromethane	11	27	27	27	.18	23.78	4.01
Chlorodehydroabietic Acid	11	18	18	18	.80	20.60	3.40
1,2,4-Trichlorobenzene	11	9	9	0	.20	4.10	.70
1,2,3-Trichlorobenzene	11	0	0	0	.30	.30	.30
2,4,5-Trichlorotoluene	11	0	0	0	.10	.10	.10
Ammonia plus Ammonium	11	0	0	0	.34	.88	.59
Bromodichloromethane	11	0	0	0	.49	.49	.49
Pentachlorobenzene	11	0	0	0	.10	.10	.10
Styrene	11	0	0	0	.48	.88	.57
o-Xylene	11	0	0	0	.38	.66	.41
p-Cresol	11	0	0	0	.13	.80	.29
Benzo(k)fluoranthene	10	0	0	0	.83	.83	.83
Benzo(g,h,i)perylene	8	0	0	0	.99	.99	.99
Dibenz(a,h)anthracene	8	0	0	0	.98	.98	.98
Octachlorodibenzofuran	2	100	50	0	1.77	4.00	2.90
Octachlorodibenzo-p-dioxin	2	50	50	50	.67	8.33	4.50

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR SULPHITE/MECHANICAL SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.2a ABITIBI-PRICE INC., FORT WILLIAM DIVISION
Control Point 0100

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
Aluminum	48	100	100	96	2.67	54.67	14.28
Zinc	48	98	96	33	.30	11.00	4.62
Abietic Acid	11	100	100	100	264.00	1,340.00	554.60
Chloroform	11	100	100	100	6.57	92.86	36.35
Isopimaric Acid	11	100	100	100	150.00	1,140.00	512.20
Neoabietic Acid	11	100	100	100	12.80	112.00	54.60
Pimaric Acid	11	100	100	100	40.00	310.00	95.00
Total Kjeldahl nitrogen	11	100	100	73	3.92	7.60	5.51
Levopimaric Acid	11	91	91	91	.80	96.00	43.20
Total phosphorus	11	91	91	27	.30	5.80	3.75
Toluene	11	91	82	82	.48	48.00	14.17
Oleic Acid	11	82	82	82	.60	56.00	18.20
Methylene chloride	11	64	55	36	.71	18.46	4.77
1,2-Dichloroethane	11	45	0	0	.64	1.02	.81
Chlorodehydroabietic Acid	11	18	18	18	.80	8.40	2.00
Benzene	11	18	9	0	.38	4.80	.86
Ammonia plus Ammonium	11	9	0	0	.22	1.16	.50
1,2,3-Trichlorobenzene	11	0	0	0	.30	.30	.30
1,2,4-Trichlorobenzene	11	0	0	0	.20	.50	.20
2,4,5-Trichlorotoluene	11	0	0	0	.10	.10	.10
Bromodichloromethane	11	0	0	0	.49	.49	.49
Camphene	11	0	0	0	.10	.26	.13
Chloromethane	11	0	0	0	.18	.59	.21
Nitrate+Nitrite	11	0	0	0	.10	.69	.30
Pentachlorobenzene	11	0	0	0	.10	.10	.10
Styrene	11	0	0	0	.48	.76	.51
o-Xylene	11	0	0	0	.38	.46	.39
Phenol	10	100	100	90	4.96	15.00	8.16
p-Cresol	10	90	50	0	.29	4.20	2.07
m-Cresol	10	70	30	0	.13	2.50	1.44
Benzo(k)fluoranthene	10	0	0	0	.83	.83	.83
Copper	9	67	11	11	.30	28.00	4.03
Benzo(g,h,i)perylene	9	0	0	0	.99	.99	.99
Dibenz(a,h)anthracene	9	0	0	0	.98	.98	.98
Octachlorodibenzo-p-dioxin	6	83	67	17	.67	8.33	3.17
Octachlorodibenzofuran	6	0	0	0	.73	.73	.73

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR SULPHITE/MECHANICAL SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.2b ABITIBI-PRICE INC., FORT WILLIAM DIVISION
Control Point 0200

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION >RMDL	>2RMDL	>5RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Aluminum	50	100	100	100	5.00	230.00	43.82
Zinc	50	100	100	98	4.10	39.00	16.57
Abietic Acid	11	100	100	100	278.00	1,940.00	809.00
Phenol	11	100	100	100	5.25	83.33	26.10
Pimaric Acid	11	100	100	100	30.00	740.00	201.00
Total Kjeldahl nitrogen	11	100	100	100	6.20	23.40	11.47
Total phosphorus	11	100	100	100	9.60	220.00	35.64
p-Cresol	11	100	100	73	2.17	82.86	24.44
Chloroform	11	100	91	64	1.91	28.57	8.16
Levopimaric Acid	11	91	91	91	.80	800.00	337.60
Neoabietic Acid	11	91	91	91	.60	600.00	249.80
Toluene	11	91	91	82	.48	234.00	52.61
m-Cresol	11	91	91	55	.13	11.18	5.08
Oleic Acid	11	73	73	73	.60	310.00	73.20
Camphene	11	73	45	9	.10	5.37	1.82
Methylene chloride	11	64	55	36	.71	71.54	9.69
1,2-Dichloroethane	11	45	0	0	.64	1.02	.81
Ammonia plus Ammonium	11	36	9	0	.56	2.84	1.08
o-Xylene	11	36	9	0	.38	2.40	.89
Chlorodehydroabietic Acid	11	27	27	18	.80	40.00	5.00
Benzene	11	18	18	9	.38	20.40	2.35
Chloromethane	11	18	9	9	.18	11.62	1.34
Styrene	11	9	0	0	.48	1.74	.64
1,2,3-Trichlorobenzene	11	0	0	0	.30	.30	.30
1,2,4-Trichlorobenzene	11	0	0	0	.20	.50	.20
2,4,5-Trichlorotoluene	11	0	0	0	.10	.10	.10
Bromodichloromethane	11	0	0	0	.49	.49	.49
Nitrate+Nitrite	11	0	0	0	.10	.80	.33
Pentachlorobenzene	11	0	0	0	.10	.10	.10
Isopimaric Acid	10	100	100	100	170.00	1,120.00	654.00
Benzo(k)fluoranthene	10	0	0	0	.83	.83	.83
Benzo(g,h,i)perylene	9	0	0	0	.99	.99	.99
Dibenz(a,h)anthracene	9	0	0	0	.98	.98	.98
Copper	8	75	38	13	.80	29.00	5.15
Octachlorodibenzo-p-dioxin	6	83	67	17	.83	6.00	2.90
Octachlorodibenzofuran	6	0	0	0	.73	.73	.73

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR SULPHITE/MECHANICAL SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.3 ABITIBI-PRICE INC., PROVINCIAL PAPERS DIVISION

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION >RMDL	>2RMDL	>5RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Aluminum	48	100	100	98	2.67	150.00	60.56
Zinc	48	94	81	8	.30	20.00	3.40
Chloroform	11	100	100	55	2.14	14.43	5.61
Total Kjeldahl nitrogen	11	100	45	0	1.56	3.60	2.23
Isopimaric Acid	11	91	82	64	.80	24.00	8.20
Styrene	11	73	45	9	.48	10.00	2.52
Methylene chloride	11	64	55	45	.71	17.69	5.79
Nitrate+Nitrite	11	64	0	0	.74	1.40	1.08
Abietic Acid	11	55	45	18	.60	13.20	3.40
Pimaric Acid	11	55	45	18	.60	9.40	3.00
Benzene	11	45	36	18	.38	12.80	2.52
Toluene	11	45	9	0	.48	2.18	1.03
1,2-Dichloroethane	11	45	0	0	.64	1.02	.81
o-Xylene	11	36	18	9	.38	38.40	4.40
Ammonia plus Ammonium	11	36	9	0	.22	2.68	.94
Oleic Acid	11	27	27	27	.60	74.00	10.80
Copper	11	27	18	18	.30	23.00	3.58
Chlorodehydroabietic Acid	11	18	9	0	.80	2.60	1.00
Total phosphorus	11	18	0	0	.46	1.22	.79
Levopimaric Acid	11	9	9	9	.80	10.60	1.60
Neoabietic Acid	11	9	9	9	.60	24.40	2.80
Chloromethane	11	9	9	0	.18	3.16	.45
Phenol	11	9	0	0	.16	1.04	.32
1,2,3-Trichlorobenzene	11	0	0	0	.30	.30	.30
1,2,4-Trichlorobenzene	11	0	0	0	.20	.20	.20
2,4,5-Trichlorotoluene	11	0	0	0	.10	.30	.10
Bromodichloromethane	11	0	0	0	.49	.49	.49
Camphene	11	0	0	0	.10	.10	.10
Pentachlorobenzene	11	0	0	0	.10	.10	.10
m-Cresol	11	0	0	0	.13	.51	.19
p-Cresol	11	0	0	0	.13	.80	.24
Benzo(k)fluoranthene	10	0	0	0	.83	.83	.83
Benzo(g,h,i)perylene	9	0	0	0	.99	.99	.99
Dibenz(a,h)anthracene	9	0	0	0	.98	.98	.98
Octachlorodibenzo-p-dioxin	6	33	0	0	.67	1.97	.97
Octachlorodibenzofuran	6	0	0	0	.73	.73	.73

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR SULPHITE/MECHANICAL SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.4 ABITIBI-PRICE INC., THUNDER BAY DIVISION

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION >RMDL	>2RMDL	>5RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Aluminum	49	100	100	100	8.00	103.33	38.94
Zinc	49	100	98	80	1.50	56.00	7.38
Total Kjeldahl nitrogen	12	100	100	8	2.50	5.60	3.69
Total phosphorus	12	100	58	0	1.43	3.60	2.43
Nitrate+Nitrite	12	42	0	0	.37	1.40	.82
Ammonia plus Ammonium	12	0	0	0	.10	.64	.29
Abietic Acid	11	100	100	100	6.40	860.00	302.20
Isopimaric Acid	11	91	91	91	.80	344.00	119.80
Levopimaric Acid	11	91	91	91	.80	110.00	31.40
Neoabietic Acid	11	91	91	91	.60	120.00	43.40
Pimaric Acid	11	91	91	91	.60	70.00	28.80
Oleic Acid	11	82	82	55	.60	108.00	19.20
Chloroform	11	73	73	18	.79	12.71	3.86
Toluene	11	64	27	0	.48	3.20	1.48
m-Cresol	11	64	9	9	.13	8.53	1.54
Phenol	11	55	9	9	.16	6.92	1.51
Methylene chloride	11	45	36	27	.25	7.31	2.54
1,2-Dichloroethane	11	45	0	0	.64	1.02	.81
Benzene	11	36	36	27	.38	12.80	3.78
p-Cresol	11	36	18	9	.13	20.86	2.62
Chlorodehydroabietic Acid	11	18	18	9	.80	12.00	2.00
Chloromethane	11	18	18	9	.18	13.51	1.73
o-Xylene	11	9	9	0	.38	4.20	.73
Styrene	11	9	0	0	.48	1.24	.55
1,2,3-Trichlorobenzene	11	0	0	0	.30	.30	.30
1,2,4-Trichlorobenzene	11	0	0	0	.20	.20	.20
2,4,5-Trichlorotoluene	11	0	0	0	.10	.10	.10
Bromodichloromethane	11	0	0	0	.49	.49	.49
Camphene	11	0	0	0	.10	.34	.16
Pentachlorobenzene	11	0	0	0	.10	.10	.10
Benzo(k)fluoranthene	10	0	0	0	.83	.83	.83
Octachlorodibenzo-p-dioxin	9	44	11	11	.67	466.67	52.67
Copper	9	22	0	0	.30	1.30	.72
Octachlorodibenzofuran	9	11	11	11	.10	100.00	11.70
Benzo(g,h,i)perylene	9	0	0	0	.99	.99	.99
Dibenz(a,h)anthracene	9	0	0	0	.98	.98	.98

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

**DETECTION FREQUENCIES AND CONCENTRATION RATIOS
FOR DEINKING/BOARD/FINE PAPERS/TISSUE SUBCATEGORY
CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY
AND SEMI-ANNUALLY IN PROCESS EFFLUENT**

Table 2.5 BEAVER WOOD FIBRE COMPANY

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
Aluminum	45	100	100	100	8.00	83.33	25.80
Zinc	44	95	75	11	.30	6.00	2.93
Dehydroabietic Acid	12	100	100	100	10.80	480.00	144.80
Isopimaric Acid	12	100	100	92	4.60	154.00	27.40
Total Kjeldahl nitrogen	12	100	100	33	2.14	6.80	4.35
Toluene	12	92	92	67	.48	28.20	9.96
Pimaric Acid	12	83	83	50	.60	26.60	7.20
Phenol	12	83	75	25	.17	10.42	3.47
Abietic Acid	12	67	67	67	.60	96.00	21.40
1,1-Dichloroethylene	12	58	25	17	.11	8.21	2.05
Total phosphorus	12	58	8	0	.50	2.50	1.15
Levopimaric Acid	12	42	42	42	.80	62.00	12.60
m-Xylene and p-Xylene	12	42	0	0	.19	1.91	.86
Neoabietic Acid	12	33	33	8	.60	36.40	4.20
Benzene	12	33	25	17	.38	6.40	1.54
Methylene chloride	12	33	25	0	.71	4.77	1.55
Copper	12	33	8	0	.30	3.50	.97
o-Xylene	12	33	8	0	.38	2.22	.85
Chloroform	12	25	17	8	.79	5.43	1.44
Chlorodehydroabietic Acid	12	25	17	0	.80	3.00	1.20
1,1-Dichloroethane	12	17	0	0	.25	1.54	.45
1,2-Dichloroethane	12	17	0	0	.64	1.02	.70
Nitrate+Nitrite	12	17	0	0	.10	1.08	.57
Pentachlorophenol	12	17	0	0	.14	1.85	.38
m-Cresol	12	17	0	0	.13	1.26	.47
Chromium	12	8	8	0	.10	3.20	.55
Tetrachloroethylene	12	8	0	0	.19	1.05	.26
1,2,3,4-Tetrachlorobenzene	12	0	0	0	.10	.10	.10
1,2,3-Trichlorobenzene	12	0	0	0	.30	.30	.30
1,2,4-Trichlorobenzene	12	0	0	0	.10	.90	.50
2-Methylnaphthalene	12	0	0	0	.10	.10	.10
Ammonia plus Ammonium	12	0	0	0	.10	.53	.22
Bromodichloromethane	12	0	0	0	.49	.49	.49
Dibromochloromethane	12	0	0	0	.22	.22	.22
Hexachlorocyclopentadiene	12	0	0	0	.40	.40	.40
Naphthalene	12	0	0	0	.11	.62	.22
Trichloroethylene	12	0	0	0	.31	.65	.48
Oleic Acid	11	45	45	36	.60	72.00	15.20
p-Cresol	11	9	0	0	.13	1.43	.38
Octachlorodibenzo-p-dioxin	2	100	50	0	1.30	3.33	2.33
Total H6CDF	1	100	100	100	750.00	750.00	750.00

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR SULPHATE (KRAFT) SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.6 BOISE CASCADE CANADA LTD., FORT FRANCES

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
Aluminum	52	100	100	100	10.83	64.67	37.82
Total Kjeldahl nitrogen	52	100	100	100	8.00	33.30	18.63
Total phosphorus	52	100	100	100	12.40	24.00	18.23
VSS	52	100	100	100	7.20	22.00	12.67
Zinc	52	100	100	98	4.82	23.00	16.72
Nitrate+Nitrite	52	15	0	0	.23	1.60	.58
Ammonia plus Ammonium	52	10	0	0	.10	1.60	.41
Chloroform	12	100	100	100	38.57	2,142.86	1,062.26
Sulphide	12	100	100	83	2.30	27.90	11.90
Copper	12	100	75	0	1.20	2.70	2.21
Toluene	12	92	92	92	.94	71.60	26.59
Benzo(k)fluoranthene	12	92	0	0	.71	1.14	1.11
Bromodichloromethane	12	92	0	0	1.00	1.19	1.17
Camphene	12	83	67	17	.10	24.29	4.31
2,3,5-Trichlorophenol	12	67	67	25	.31	7.31	3.40
o-Cresol	12	67	67	17	.10	6.38	2.33
2,4-Dichlorophenol	12	67	58	8	.18	5.41	2.13
Neoabietic Acid	12	67	50	25	1.00	15.40	4.00
Abietic Acid	12	58	50	42	1.00	49.60	12.80
Thallium	12	58	0	0	.50	1.00	.88
2,4,6-Trichlorophenol	12	42	42	42	.31	16.92	5.32
Methylene chloride	12	33	17	8	.98	212.31	18.93
m-Cresol	12	17	8	8	.10	8.24	.96
Molybdenum	12	17	0	0	.60	1.05	.86
Benzene	12	8	8	8	.72	8.00	1.38
Styrene	12	8	8	0	.50	4.00	.88
1,2-Dichloroethane	12	0	0	0	.60	1.00	.67
Acenaphthylene	12	0	0	0	.14	.93	.21
Chromium	12	0	0	0	.27	.78	.44
Chrysene	12	0	0	0	.67	.80	.68
Fluoranthene	12	0	0	0	.50	1.00	.54
Mercury	12	0	0	0	.20	.40	.22
Naphthalene	12	0	0	0	.19	1.00	.25
Nickel	12	0	0	0	.39	1.00	.52
Phenanthrene	12	0	0	0	1.00	1.00	1.00
Phenol	12	0	0	0	.10	.37	.12
Pyrene	12	0	0	0	.75	1.00	.77
Vanadium	12	0	0	0	.10	1.00	.28
Isopimaric Acid	11	100	100	73	4.00	104.00	35.20
Benzo(g,h,i)perylene	11	100	100	0	2.43	2.43	2.43
Dibenz(a,h)anthracene	11	100	0	0	1.08	1.08	1.08
Pimaric Acid	11	91	91	64	1.00	37.40	15.60
Chlorodehydroabietic Acid	11	82	82	82	1.00	64.60	19.60
Oleic Acid	11	82	73	64	1.00	87.60	37.00
Total TCDF	11	73	73	55	.53	34.67	10.67
Levopimaric Acid	11	73	55	36	1.00	11.20	4.20
Hexachlorobenzene	11	64	64	55	1.00	25.40	10.60
Pentachlorobenzene	11	45	45	45	.60	68.80	14.30
Octachlorodibenzo-p-dioxin	11	36	0	0	.67	1.57	.90
1,2,3,4-Tetrachlorobenzene	11	18	18	18	1.00	23.60	4.20
Total H7CDD	11	9	9	9	.57	7.00	1.20
Total PCDD	11	9	9	0	.95	2.75	1.10
p-Cresol	11	9	9	0	.10	3.71	.48
2,3,7,8 TCDD	11	9	0	0	.55	1.20	.60

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR SULPHATE (KRAFT) SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.6 (cont'd) BOISE CASCADE CANADA LTD., FORT FRANCES

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
Total PCDF	11	9	0	0	.87	1.07	.87
Total TCDD	11	9	0	0	.55	1.20	.60
Octachlorodibenzofuran	11	0	0	0	.73	.73	.73
Total H6CDF	11	0	0	0	.75	.75	.75
Total H7CDF	11	0	0	0	.67	.67	.67
2,4,5-Trichlorotoluene	10	100	100	100	9.60	157.90	83.30
1,2,3-Trichlorobenzene	10	70	70	60	1.00	304.60	77.60
Octachlorostyrene	10	50	50	10	.80	10.50	3.00
1,2,4-Trichlorobenzene	10	30	30	30	1.00	43.20	8.70
Hexachloroethane	10	30	20	20	.50	14.20	3.00
Total H6CDD	10	10	0	0	.73	1.23	.77
Hexachlorocyclopentadiene	9	56	33	22	.80	34.40	6.10
Hexachlorobutadiene	9	33	22	22	1.00	7.80	2.30
1,2,4,5-Tetrachlorobenzene	5	80	80	80	1.00	19.20	9.40
1,2,3,5-Tetrachlorobenzene	5	60	60	60	1.00	258.90	101.80

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR SULPHITE/MECHANICAL SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.7 BOISE CASCADE CANADA LTD., KENORA

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION >RMDL	>2RMDL	>5RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Aluminum	52	100	100	98	4.67	28.83	11.11
Zinc	52	100	100	62	3.40	14.46	5.72
Total phosphorus	12	100	100	0	2.40	4.00	3.13
Total Kjeldahl nitrogen	12	100	92	25	1.10	7.60	4.07
Copper	12	100	17	0	1.20	2.40	1.63
Benzo(g,h,i)perylene	12	92	92	0	.86	2.43	2.30
Chlorodehydroabietic Acid	12	92	83	75	1.00	72.00	27.00
Bromodichloromethane	12	92	8	8	1.00	8.25	1.76
Benzo(k)fluoranthene	12	92	0	0	.71	1.14	1.11
Dibenz(a,h)anthracene	12	92	0	0	.46	1.08	1.03
Chloroform	12	75	75	67	.94	20.57	10.63
Nitrate+Nitrite	12	42	8	0	.23	2.20	.92
Camphene	12	25	17	8	.10	9.33	1.25
m-Cresol	12	17	8	0	.10	3.06	.52
Methylene chloride	12	17	0	0	.98	1.23	1.02
Phenol	12	8	8	0	.10	2.40	.49
Styrene	12	8	0	0	.50	1.60	.63
1,2-Dichloroethane	12	0	0	0	.60	1.00	.67
Ammonia plus Ammonium	12	0	0	0	.10	1.00	.29
Benzene	12	0	0	0	.72	1.00	.77
Toluene	12	0	0	0	.94	1.00	.95
o-Xylene	12	0	0	0	.52	1.00	.60
Oleic Acid	11	100	100	100	8.00	523.60	203.60
Isopimaric Acid	11	100	100	91	3.80	1,941.40	1,003.80
Pimaric Acid	11	100	100	91	4.20	276.60	148.40
Abietic Acid	11	100	100	82	2.20	1,612.60	842.40
1,2,3-Trichlorobenzene	11	91	91	64	1.00	17.40	9.10
Neoabietic Acid	11	82	73	73	1.00	407.20	187.40
Pentachlorobenzene	11	36	36	9	.60	6.00	2.00
p-Cresol	11	9	9	0	.10	2.97	.42
Chloromethane	11	0	0	0	.51	.89	.58
1,2,4-Trichlorobenzene	10	60	60	60	1.00	15.60	6.60
Levopimaric Acid	9	44	44	44	1.00	266.40	65.00
2,4,5-Trichlorotoluene	7	71	71	57	1.00	101.60	36.60
Octachlorodibenzo-p-dioxin	6	83	67	50	.67	14.67	5.73
Octachlorodibenzofuran	6	17	17	0	.73	2.67	1.10
DOC	1	100	0	0	1.74	1.74	1.74

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR SULPHATE (KRAFT) SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.8 CANADIAN PACIFIC FOREST PRODUCTS LTD., DRYDEN

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
Aluminum	65	92	92	92	.10	102.67	41.51
Zinc	65	92	92	89	.10	31.00	10.92
Nitrate+Nitrite	53	100	66	64	2.00	115.96	35.45
Total Kjeldahl nitrogen	53	94	87	26	.56	10.08	3.98
Ammonia plus Ammonium	53	83	62	26	.10	11.20	3.43
VSS	52	96	96	67	.68	7.88	5.26
Total phosphorus	12	100	100	67	2.00	22.00	12.50
Benzo(g,h,i)perylene	12	92	92	0	.86	2.43	2.30
Sulphide	12	92	58	17	.60	20.20	4.05
Benzo(k)fluoranthene	12	92	0	0	.71	1.14	1.11
Dibenz(a,h)anthracene	12	92	0	0	.46	1.08	1.03
2,3,5-Trichlorophenol	12	83	83	75	.31	15.69	7.91
Oleic Acid	12	83	83	50	1.00	35.00	12.20
Chlorodehydroabietic Acid	12	83	67	58	1.00	46.00	10.40
2,4-Dichlorophenol	12	75	58	0	.18	4.47	2.25
Molybdenum	12	75	0	0	.20	1.33	1.02
Total TCDF	12	67	58	33	.53	12.67	4.07
Isopimaric Acid	12	58	50	8	1.00	7.20	2.40
Thallium	12	58	0	0	.50	1.33	.93
Abietic Acid	12	50	50	25	1.00	28.40	4.60
Neoabietic Acid	12	50	33	8	.80	11.20	2.20
Pimaric Acid	12	42	25	8	1.00	5.20	1.80
Levopimaric Acid	12	33	8	0	1.00	2.00	1.20
2,4,6-Trichlorophenol	12	17	17	17	.31	20.77	3.21
Copper	12	17	0	0	.50	1.50	.76
Naphthalene	12	8	0	0	.19	1.00	.32
Octachlorodibenzofuran	12	8	0	0	.73	1.13	.77
o-Cresol	12	8	0	0	.10	1.01	.32
2,3,7,8 TCDD	12	0	0	0	.55	.55	.55
Acenaphthylene	12	0	0	0	.14	.93	.21
Camphene	12	0	0	0	.10	.37	.12
Chrysene	12	0	0	0	.67	.80	.68
Fluoranthene	12	0	0	0	.50	1.00	.54
Mercury	12	0	0	0	.20	.75	.25
Nickel	12	0	0	0	.39	1.00	.52
Octachlorodibenzo-p-dioxin	12	0	0	0	.67	.87	.67
Phenanthrene	12	0	0	0	1.00	1.00	1.00
Phenol	12	0	0	0	.10	.37	.12
Pyrene	12	0	0	0	.75	1.00	.77
Total H6CDD	12	0	0	0	.73	.73	.73
Total H6CDF	12	0	0	0	.75	.75	.75
Total H7CDD	12	0	0	0	.57	.57	.57
Total H7CDF	12	0	0	0	.67	.67	.67
Total PCDD	12	0	0	0	.95	.95	.95
Total PCDF	12	0	0	0	.87	.87	.87
Total TCDD	12	0	0	0	.55	.55	.55
Vanadium	12	0	0	0	.10	1.00	.25
m-Cresol	12	0	0	0	.10	.74	.18
Chloroform	11	100	100	91	4.29	397.14	177.92
Bromodichloromethane	11	100	9	9	1.19	8.25	1.83
1,2,4-Trichlorobenzene	11	27	27	27	.70	31.20	6.70
Toluene	11	27	27	27	.94	25.20	4.87
Hexachlorocyclopentadiene	11	27	27	9	.80	11.40	2.30
p-Cresol	11	0	0	0	.10	.71	.16

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR SULPHATE (KRAFT) SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.8 (cont'd) CANADIAN PACIFIC FOREST PRODUCTS LTD., DRYDEN

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
Hexachloroethane	10	30	30	20	1.00	9.80	2.70
Methylene chloride	10	10	10	10	.98	12.31	2.11
1,2-Dichloroethane	10	0	0	0	.60	1.00	.64
Benzene	10	0	0	0	.72	1.00	.75
Styrene	10	0	0	0	.50	1.00	.55
1,2,3-Trichlorobenzene	9	100	100	100	36.00	125.90	73.60
Pentachlorobenzene	9	56	56	44	1.00	73.40	14.70
Hexachlorobenzene	9	44	44	44	1.00	221.20	48.20
1,2,4,5-Tetrachlorobenzene	9	44	44	33	.90	17.60	5.70
Hexachlorobutadiene	8	75	63	38	1.00	11.20	4.40
2,4,5-Trichlorotoluene	8	63	63	63	.70	116.70	41.30
1,2,3,5-Tetrachlorobenzene	8	38	38	38	.80	109.50	31.20
1,2,3,4-Tetrachlorobenzene	8	38	38	13	1.00	5.20	1.90
Octachlorostyrene	7	71	71	57	1.00	98.90	22.50

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR SULPHATE (KRAFT) SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.9 CANADIAN PACIFIC FOREST PRODUCTS LTD., THUNDER BAY

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION >RMDL	>2RMDL	>5RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Aluminum	43	100	100	100	79.67	255.00	159.38
Zinc	43	100	100	100	8.00	33.00	16.15
Ammonia plus Ammonium	41	7	2	2	.10	80.00	2.36
Total phosphorus	40	100	100	88	3.80	10.20	6.58
Total Kjeldahl nitrogen	40	95	90	8	1.00	5.90	2.98
Nitrate+Nitrite	40	0	0	0	.23	.80	.33
Total TCDF	11	64	45	27	.53	8.67	3.27
Octachlorodibenzo-p-dioxin	11	36	36	18	.67	31.67	4.47
Octachlorodibenzofuran	11	9	9	0	.73	2.93	.93
2,3,7,8 TCDD	11	0	0	0	.55	.55	.55
Total H6CDD	11	0	0	0	.73	.73	.73
Total H6CDF	11	0	0	0	.75	.75	.75
Total H7CDD	11	0	0	0	.57	.57	.57
Total H7CDF	11	0	0	0	.67	.67	.67
Total PCDD	11	0	0	0	.95	.95	.95
Total PCDF	11	0	0	0	.87	.87	.87
Chloroform	10	100	100	100	1,548.57	2,691.43	2,172.77
Benzo(g,h,i)perylene	10	100	100	0	2.43	2.43	2.43
Chromium	10	100	90	0	1.88	4.61	3.40
Copper	10	100	40	0	1.70	4.20	2.26
Benzo(k)fluoranthene	10	100	0	0	1.14	1.14	1.14
Dibenz(a,h)anthracene	10	100	0	0	1.08	1.08	1.08
Phenol	10	90	90	80	.10	48.75	11.60
Sulphide	10	90	80	40	.60	15.50	6.30
2,4-Dichlorophenol	10	90	70	0	.18	4.00	2.30
Bromodichloromethane	10	90	0	0	1.00	1.37	1.19
Chlorodehydroabietic Acid	10	80	80	80	1.00	162.80	61.80
Oleic Acid	10	80	80	80	1.00	152.20	53.40
2,4,5-Trichlorotoluene	10	70	70	70	1.00	439.00	144.00
Abietic Acid	10	70	70	70	1.00	442.40	131.80
Isopimaric Acid	10	70	70	70	1.00	503.00	162.40
Pimaric Acid	10	70	70	70	1.00	82.60	29.60
Neoabietic Acid	10	60	60	60	1.00	115.40	34.00
2,4,6-Trichlorophenol	10	50	50	40	.31	11.69	4.05
2,3,5-Trichlorophenol	10	40	40	20	.31	9.23	2.41
1,2,3,4-Tetrachlorobenzene	10	30	30	30	1.00	37.40	6.70
Pentachlorobenzene	10	30	30	30	1.00	126.00	26.30
Toluene	10	30	20	20	.94	6.00	1.97
Camphene	10	20	20	10	.10	6.57	1.12
Methylene chloride	10	20	0	0	.98	1.23	1.03
Phenanthrene	10	20	0	0	1.00	1.25	1.02
Naphthalene	10	10	0	0	.19	1.56	.47
1,2-Dichloroethane	10	0	0	0	.60	1.00	.68
Acenaphthylene	10	0	0	0	.14	.14	.14
Benzene	10	0	0	0	.72	1.00	.78
Chrysene	10	0	0	0	.67	.67	.67
Fluoranthene	10	0	0	0	.50	.50	.50
Mercury	10	0	0	0	.20	.40	.23
Molybdenum	10	0	0	0	.35	1.00	.59
Nickel	10	0	0	0	.30	1.00	.52
Pyrene	10	0	0	0	.75	.75	.75
Styrene	10	0	0	0	.50	1.00	.60
Thallium	10	0	0	0	.50	.83	.60
Vanadium	10	0	0	0	.12	1.00	.33

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR SULPHATE (KRAFT) SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.9 (cont'd) CANADIAN PACIFIC FOREST PRODUCTS LTD., THUNDER BAY

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
o-Cresol	10	0	0	0	.10	.99	.24
1,2,3-Trichlorobenzene	9	78	78	78	1.00	263.70	69.20
Octachlorostyrene	9	67	67	44	1.00	12.70	5.50
Hexachloroethane	9	56	44	22	1.00	13.60	4.30
Levopimaric Acid	9	44	44	33	1.00	45.00	9.20
1,2,4-Trichlorobenzene	9	33	33	33	1.00	208.30	40.80
Hexachlorocyclopentadiene	9	33	22	11	1.00	14.80	2.90
Total TCDD	9	0	0	0	.55	.55	.55
Hexachlorobenzene	8	88	88	88	1.00	135.00	48.70
m-Cresol	8	13	13	13	.10	23.24	3.01
p-Cresol	8	0	0	0	.10	.11	.10
1,2,4,5-Tetrachlorobenzene	6	50	50	50	1.00	61.20	19.60
Hexachlorobutadiene	6	50	33	33	1.00	16.00	4.70
1,2,3,5-Tetrachlorobenzene	6	17	17	17	1.00	450.30	75.90

NOTE: (1) Concentration Ratio = concentration divided by
Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS
FOR SULPHATE (KRAFT) SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.10 DOMTAR INC., FINE PAPERS DIVISION (CORNWALL)

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
Aluminum	52	100	100	100	16.33	286.33	52.92
Zinc	52	100	100	44	2.00	8.00	4.49
Abietic Acid	12	100	100	100	12.20	76.40	38.00
Benzene	12	100	100	100	8.80	66.40	20.93
Chloroform	12	100	100	100	195.71	498.57	341.19
Phenol	12	100	100	100	8.17	77.50	43.14
Total Kjeldahl nitrogen	12	100	100	83	2.60	12.00	6.63
Chlorodehydroabietic Acid	12	100	100	75	2.00	17.00	7.80
Total phosphorus	12	100	100	17	2.15	5.00	3.37
Sulphide	12	100	92	83	1.10	47.50	17.00
Oleic Acid	12	100	92	75	1.40	38.60	20.00
Neoabietic Acid	12	75	75	67	1.00	36.80	13.00
Isopimaric Acid	12	67	42	8	.80	8.40	2.00
Copper	12	58	17	0	1.00	3.00	1.25
Pimaric Acid	12	50	25	0	1.00	2.40	1.40
Ammonia plus Ammonium	12	42	42	8	.24	5.92	1.94
Nitrate+Nitrite	12	33	25	0	.12	3.96	1.02
Chromium	12	25	0	0	1.00	1.00	1.00
1,2,4,5-Tetrachlorobenzene	12	8	0	0	.50	1.50	.60
Mercury	12	8	0	0	.90	1.50	1.03
1,2,3,4-Tetrachlorobenzene	12	0	0	0	.50	.50	.50
1,2,3,5-Tetrachlorobenzene	12	0	0	0	.50	.70	.50
1,2,3-Trichlorobenzene	12	0	0	0	.50	.50	.50
1,2,4-Trichlorobenzene	12	0	0	0	.50	.80	.60
2,3,7,8 TCDD	12	0	0	0	.60	.60	.60
2,4,5-Trichlorotoluene	12	0	0	0	.50	.50	.50
Hexachlorobenzene	12	0	0	0	.50	.50	.50
Hexachlorobutadiene	12	0	0	0	.50	.50	.50
Hexachlorocyclopentadiene	12	0	0	0	1.00	1.00	1.00
Hexachloroethane	12	0	0	0	.50	.50	.50
Molybdenum	12	0	0	0	1.00	1.00	1.00
Nickel	12	0	0	0	.50	.50	.50
Octachlorodibenzofuran	12	0	0	0	.93	.93	.93
Octachlorostyrene	12	0	0	0	.50	.50	.50
Pentachlorobenzene	12	0	0	0	.50	.50	.50
Thallium	12	0	0	0	1.00	1.00	1.00
Total H7CDF	12	0	0	0	.93	.93	.93
Total PCDD	12	0	0	0	.35	.35	.35
Total TCDD	12	0	0	0	.60	.60	.60
Vanadium	12	0	0	0	.67	.67	.67
Phenanthrene	11	100	100	100	7.25	60.50	29.57
Octachlorodibenzo-p-dioxin	11	100	82	45	1.83	12.33	5.53
Total TCDF	11	91	64	18	.60	6.60	2.73
Total H7CDD	11	18	9	0	.73	3.40	1.07
Total H6CDD	11	9	9	0	.70	3.40	.93
Total H6CDF	11	0	0	0	.60	.60	.60
Total PCDF	11	0	0	0	.80	.80	.80
Toluene	10	100	100	100	7.00	26.00	13.34
Fluoranthene	8	100	100	75	2.75	24.50	12.47
Pyrene	7	100	86	71	1.75	16.50	7.53
o-Cresol	7	71	14	0	.27	2.22	1.32
Naphthalene	6	100	100	50	3.37	6.56	4.86
Acenaphthylene	6	100	83	0	1.57	4.50	3.23
Chrysene	6	67	67	50	1.00	9.33	4.83

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR SULPHATE (KRAFT) SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.10 (cont'd) DOMTAR INC., FINE PAPERS DIVISION (CORNWALL)

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION >RMDL	>2RMDL	>5RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Styrene	5	100	100	100	6.20	9.80	8.24
Levopimaric Acid	4	75	50	50	1.00	7.40	3.80
Benzo(k)fluoranthene	4	25	25	0	.71	2.57	1.18
2,3,5-Trichlorophenol	4	0	0	0	.77	.77	.77
2,4,6-Trichlorophenol	4	0	0	0	.77	.77	.77
2,4-Dichlorophenol	4	0	0	0	.59	.59	.59
Benzo(g,h,i)perylene	4	0	0	0	.71	.71	.71
Camphene	4	0	0	0	.57	.57	.57
Dibenz(a,h)anthracene	4	0	0	0	.77	.77	.77
Bromodichloromethane	2	100	100	0	2.25	4.62	3.44
m-Cresol	2	0	0	0	.29	.29	.29
p-Cresol	2	0	0	0	.29	.29	.29

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR SULPHATE (KRAFT) SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.11 DOMTAR INC., CONTAINERBOARD DIVISION (RED ROCK)

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
Aluminum	48	100	100	100	51.67	213.67	99.26
Zinc	48	100	100	19	2.00	10.00	3.85
Octachlorodibenzo-p-dioxin	12	92	92	75	1.00	46.67	10.97
2,3,7,8 TCDD	12	0	0	0	1.00	1.00	1.00
Octachlorodibenzofuran	12	0	0	0	1.00	1.00	1.00
Total H6CDD	12	0	0	0	1.00	1.00	1.00
Total H6CDF	12	0	0	0	1.00	1.00	1.00
Total H7CDD	12	0	0	0	1.00	1.00	1.00
Total H7CDF	12	0	0	0	1.00	1.00	1.00
Total PCDD	12	0	0	0	1.00	1.00	1.00
Total PCDF	12	0	0	0	1.00	1.00	1.00
Total TCDD	12	0	0	0	1.00	1.00	1.00
Total TCDF	12	0	0	0	1.00	1.00	1.00
Abietic Acid	11	100	100	100	85.20	453.60	172.20
Chloroform	11	100	100	100	101.71	271.43	190.90
Isopimaric Acid	11	100	100	100	25.80	90.60	46.80
Neoabietic Acid	11	100	100	100	82.00	900.40	258.40
Total Kjeldahl nitrogen	11	100	100	9	2.20	5.20	3.57
Sulphide	11	100	91	55	1.00	153.00	20.35
Total phosphorus	11	100	91	0	1.80	4.60	2.33
Oleic Acid	11	91	91	91	1.00	36.60	13.60
Pimaric Acid	11	91	91	91	1.00	25.80	17.60
Phenol	11	82	55	36	.42	9.62	4.01
Ammonia plus Ammonium	11	82	9	0	.64	3.20	1.62
Chlorodehydroabietic Acid	11	18	18	9	1.00	18.60	2.80
Chromium	11	18	0	0	1.00	1.00	1.00
Hexachlorobenzene	11	9	9	9	.50	7.60	1.20
Hexachlorobutadiene	11	9	9	9	.50	6.90	1.10
1,2,4,5-Tetrachlorobenzene	11	9	9	0	.50	2.90	.70
1,2,4-Trichlorobenzene	11	9	9	0	.50	4.60	.90
Octachlorostyrene	11	9	9	0	.50	4.70	.90
Copper	11	9	0	0	1.00	1.00	1.00
1,2,3,4-Tetrachlorobenzene	11	0	0	0	.50	.50	.50
1,2,3,5-Tetrachlorobenzene	11	0	0	0	.50	.50	.50
1,2,3-Trichlorobenzene	11	0	0	0	.50	.50	.50
2,4,5-Trichlorotoluene	11	0	0	0	.50	.50	.50
Hexachlorocyclopentadiene	11	0	0	0	1.00	1.00	1.00
Hexachloroethane	11	0	0	0	.50	.60	.50
Mercury	11	0	0	0	1.00	1.00	1.00
Molybdenum	11	0	0	0	1.00	1.00	1.00
Nickel	11	0	0	0	.50	.50	.50
Pentachlorobenzene	11	0	0	0	.50	.90	.50
Thallium	11	0	0	0	1.00	1.00	1.00
Vanadium	11	0	0	0	.67	.67	.67
2,4,6-Trichlorophenol	9	56	56	0	.77	4.23	2.18
2,3,5-Trichlorophenol	9	0	0	0	.77	.77	.77
2,4-Dichlorophenol	9	0	0	0	.59	.59	.59
Acenaphthylene	9	0	0	0	.71	.71	.71
Benzo(g,h,i)perylene	9	0	0	0	.71	.71	.71
Benzo(k)fluoranthene	9	0	0	0	.71	.71	.71
Camphene	9	0	0	0	.57	.57	.57
Chrysene	9	0	0	0	1.00	1.00	1.00
Dibenz(a,h)anthracene	9	0	0	0	.77	.77	.77
Fluoranthene	9	0	0	0	1.00	1.00	1.00

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR SULPHATE (KRAFT) SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.11 (cont'd) DOMTAR INC., CONTAINERBOARD DIVISION (RED ROCK)

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION >RMDL	>2RMDL	>5RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Naphthalene	9	0	0	0	.62	.62	.62
Phenanthrene	9	0	0	0	1.00	1.00	1.00
Pyrene	9	0	0	0	1.00	1.00	1.00
m-Cresol	9	0	0	0	.29	.29	.29
o-Cresol	9	0	0	0	.27	.27	.27
p-Cresol	9	0	0	0	.29	.29	.29
Nitrate+Nitrite	6	17	0	0	.24	1.20	.53

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR DEINKING/BOARD/FINE PAPERS/TISSUE SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.12 DOMTAR INC., FINE PAPERS DIVISION (ST. CATHARINES)

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION >RMDL	>2RMDL	>5RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Aluminum	51	98	98	98	.10	173.33	48.56
Zinc	50	72	38	0	.10	3.50	1.63
Dehydroabietic Acid	12	100	100	100	48.00	540.00	198.60
Total Kjeldahl nitrogen	12	100	75	42	1.48	74.66	9.57
Isopimaric Acid	12	92	83	58	.80	68.00	12.20
Abietic Acid	12	83	83	75	.60	90.00	28.80
Levopimaric Acid	12	67	67	50	.80	80.00	13.60
Nitrate+Nitrite	12	58	0	0	.35	1.84	1.17
Methylene chloride	12	50	50	42	.71	36.15	8.64
Pimaric Acid	12	50	42	33	.60	72.00	9.20
Chloroform	12	50	33	8	.46	14.29	2.58
Chlorodehydroabietic Acid	12	42	42	17	.80	18.20	3.40
Benzene	12	33	25	25	.38	17.60	2.73
Copper	12	33	0	0	.30	1.60	.83
m-Xylene and p-Xylene	12	25	0	0	.19	1.62	.59
Oleic Acid	12	17	17	17	.60	110.00	11.80
Bromodichloromethane	12	17	8	0	.36	2.00	.66
Toluene	12	17	8	0	.48	4.20	.99
1,2-Dichloroethane	12	17	0	0	.64	1.02	.70
o-Xylene	12	17	0	0	.38	1.74	.68
Neoabietic Acid	12	8	8	0	.60	3.40	.80
Tetrachloroethylene	12	8	8	0	.19	2.45	.38
Trichloroethylene	12	8	8	0	.48	3.63	.75
m-Cresol	12	8	8	0	.13	4.76	.51
1,2,3,4-Tetrachlorobenzene	12	8	0	0	.10	1.20	.20
1,1-Dichloroethane	12	0	0	0	.25	.25	.25
1,1-Dichloroethylene	12	0	0	0	.11	.12	.11
1,2,3-Trichlorobenzene	12	0	0	0	.30	.30	.30
1,2,4-Trichlorobenzene	12	0	0	0	.20	.80	.30
2-Methylnaphthalene	12	0	0	0	.10	.10	.10
Ammonia plus Ammonium	12	0	0	0	.10	.46	.26
Chromium	12	0	0	0	.10	.60	.29
Dibromochloromethane	12	0	0	0	.22	.29	.23
Hexachlorocyclopentadiene	12	0	0	0	.40	.40	.40
Naphthalene	12	0	0	0	.11	.19	.12
Pentachlorophenol	12	0	0	0	.14	.14	.14
Phenol	12	0	0	0	.16	.96	.44
Total phosphorus	12	0	0	0	.10	.41	.24
p-Cresol	12	0	0	0	.13	.40	.15
Octachlorodibenzo-p-dioxin	6	100	83	50	1.10	6,666.67	2,171.47
Total H6CDF	6	100	0	0	1.10	1.10	1.10
DOC	1	0	0	0	.10	.10	.10

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CORRUGATING SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.13 DOMTAR INC., CONTAINERBOARD DIVISION (TRENTON)

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
Aluminum	53	100	100	100	65.33	154.33	102.46
Zinc	53	100	100	100	9.00	35.00	16.98
Abietic Acid	12	100	100	100	76.20	196.00	122.60
Isopimaric Acid	12	100	100	100	30.40	80.20	49.40
Oleic Acid	12	100	100	100	42.00	142.80	79.80
Total Kjeldahl nitrogen	12	100	100	100	6.20	24.80	15.78
Copper	12	100	100	33	2.00	6.00	4.17
Phenol	12	100	92	92	1.37	579.17	267.96
Total phosphorus	12	100	92	92	1.40	17.00	11.37
Nitrate+Nitrite	12	100	50	17	1.12	5.60	2.51
Pimaric Acid	12	92	92	92	1.00	52.80	25.60
o-Cresol	12	92	92	0	.41	3.84	2.70
Neoabietic Acid	12	67	67	67	1.00	529.00	163.20
Chlorodehydroabietic Acid	12	67	58	33	1.00	18.20	4.20
Cadmium	12	67	50	0	1.00	3.50	1.75
Ammonia plus Ammonium	12	50	33	0	.40	3.76	1.44
Chromium	12	33	0	0	1.00	1.50	1.08
Cobalt	12	0	0	0	1.00	1.00	1.00
Lead	12	0	0	0	1.00	1.00	1.00
Molybdenum	12	0	0	0	1.00	1.00	1.00
Nickel	12	0	0	0	.50	.50	.50
Thallium	12	0	0	0	1.00	1.00	1.00
Vanadium	12	0	0	0	.67	.67	.67
Chloroform	7	86	86	43	.86	13.00	4.61
Levopimaric Acid	3	33	33	0	1.00	2.80	1.60
Octachlorodibenzo-p-dioxin	2	100	100	100	226.67	500.00	363.33
Octachlorodibenzofuran	2	100	100	100	25.00	28.00	26.50
Total H6CDD	2	100	100	100	9.67	10.00	9.83
Total H7CDD	2	100	100	100	33.33	40.00	36.67
Total H7CDF	2	100	100	100	9.67	11.67	10.67
Total TCDF	2	100	100	50	4.87	6.67	5.80

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS
FOR SULPHATE (KRAFT) SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY,
BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.14 E.B. EDDY FOREST PRODUCTS LTD., ESPANOLA

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
Aluminum	63	100	100	97	2.33	136.67	25.60
Zinc	60	97	97	85	.30	18.00	8.51
VSS	54	78	43	0	.10	4.00	1.65
Chloroform	12	100	100	100	7.86	61.43	23.49
Total Kjeldahl nitrogen	12	100	100	67	2.68	11.60	6.96
Sulphide	12	100	100	58	2.50	500.00	50.10
Total phosphorus	12	100	100	50	2.60	7.50	5.12
Ammonia plus Ammonium	12	75	75	42	.10	8.00	4.02
2,4,6-Trichlorophenol	12	75	58	17	.10	7.54	2.91
Methylene chloride	12	50	42	25	.71	107.69	11.56
Benzene	12	50	33	33	.38	32.20	5.40
Toluene	12	33	25	0	.48	4.80	1.36
1,2-Dichloroethane	12	25	0	0	.64	1.02	.73
Isopimaric Acid	12	17	17	17	.80	6.40	1.60
Chlorodehydroabietic Acid	12	17	17	0	.80	4.40	1.20
Pimaric Acid	12	17	17	0	.60	3.40	1.00
2,4-Dichlorophenol	12	17	0	0	.24	1.00	.64
Oleic Acid	12	8	8	8	.60	9.00	1.20
Total PCDF	12	8	8	8	.87	8.67	1.53
1,2,4-Trichlorobenzene	12	8	8	0	.20	3.00	.40
Abietic Acid	12	8	8	0	.60	2.80	.80
Neoabietic Acid	12	8	8	0	.60	2.20	.80
Styrene	12	8	8	0	.48	2.22	.65
Nitrate+Nitrite	12	8	0	0	.10	1.68	.52
o-Cresol	12	8	0	0	.15	1.08	.25
1,2,3,4-Tetrachlorobenzene	12	0	0	0	.10	.80	.20
1,2,3,5-Tetrachlorobenzene	12	0	0	0	.20	.20	.20
1,2,3-Trichlorobenzene	12	0	0	0	.30	.30	.30
1,2,4,5-Tetrachlorobenzene	12	0	0	0	.10	.10	.10
2,3,5-Trichlorophenol	12	0	0	0	.10	.10	.10
2,3,7,8 TCDD	12	0	0	0	.55	.55	.55
2,4,5-Trichlorotoluene	12	0	0	0	.10	.10	.10
Acenaphthylene	12	0	0	0	.11	.11	.11
Bromodichloromethane	12	0	0	0	.49	.49	.49
Camphene	12	0	0	0	.10	.10	.10
Chrysene	12	0	0	0	.90	.90	.90
Fluoranthene	12	0	0	0	.32	.32	.32
Hexachlorobenzene	12	0	0	0	.40	.40	.40
Hexachlorobutadiene	12	0	0	0	.20	.20	.20
Hexachlorocyclopentadiene	12	0	0	0	.40	.70	.40
Hexachloroethane	12	0	0	0	.20	.90	.30
Levopimaric Acid	12	0	0	0	.80	.80	.80
Naphthalene	12	0	0	0	.11	.11	.11
Octachlorodibenzo-p-dioxin	12	0	0	0	.67	.67	.67
Octachlorodibenzofuran	12	0	0	0	.73	.73	.73
Octachlorostyrene	12	0	0	0	.10	.10	.10
Pentachlorobenzene	12	0	0	0	.10	.10	.10
Phenanthrene	12	0	0	0	.50	.50	.50
Phenol	12	0	0	0	.12	.33	.20
Pyrene	12	0	0	0	.65	.65	.65
Total H6CDD	12	0	0	0	.73	.73	.73
Total H6CDF	12	0	0	0	.75	.75	.75
Total H7CDD	12	0	0	0	.57	.57	.57
Total H7CDF	12	0	0	0	.67	.67	.67

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR SULPHATE (KRAFT) SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.14 (cont'd) E.B. EDDY FOREST PRODUCTS LTD., ESPANOLA

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION >RMDL	>2RMDL	>5RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Total PCDD	12	0	0	0	.95	.95	.95
m-Cresol	12	0	0	0	.13	.97	.23
p-Cresol	12	0	0	0	.13	.49	.17
Nickel	11	73	27	0	.45	3.20	1.57
Mercury	11	9	0	0	.56	1.50	.65
Benzo(k)fluoranthene	11	0	0	0	.83	.83	.83
Total TCDD	11	0	0	0	.55	.55	.55
Total TCDF	10	50	50	20	.53	6.40	2.40
Benzo(g,h,i)perylene	10	0	0	0	.99	.99	.99
Dibenz(a,h)anthracene	10	0	0	0	.98	.98	.98
Copper	7	57	29	14	.30	29.00	5.19
Chromium	7	29	14	0	.10	2.50	.79
Vanadium	7	29	14	0	.13	2.33	.70
Molybdenum	4	0	0	0	.25	.25	.25
Thallium	4	0	0	0	.47	.90	.79

NOTE: (1) Concentration Ratio = concentration divided by
Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR DEINKING/BOARD/FINE PAPERS/TISSUE SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.15 E.B. EDDY FOREST PRODUCTS LTD., OTTAWA

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
Aluminum	54	100	100	100	27.33	243.33	99.25
Zinc	54	61	35	6	.20	20.00	2.19
Total Kjeldahl nitrogen	12	100	92	67	1.70	20.40	7.17
Chloroform	12	83	83	33	.79	15.57	5.23
Nitrate+Nitrite	12	75	0	0	.17	1.56	1.07
1,2,4-Trichlorobenzene	12	50	50	17	.20	5.50	2.30
1,2-Dichloroethane	12	50	8	8	.64	6.87	1.32
Ammonia plus Ammonium	12	50	0	0	.10	1.60	.86
1,2,3,4-Tetrachlorobenzene	12	33	8	0	.10	2.00	.80
1,2,3-Trichlorobenzene	12	33	0	0	.30	1.70	.70
Benzene	12	25	25	17	.38	8.00	1.86
Toluene	12	25	17	0	.48	4.20	1.06
m-Xylene and p-Xylene	12	25	0	0	.19	1.55	.55
o-Xylene	12	25	0	0	.38	1.74	.68
Total phosphorus	12	17	17	0	.27	3.90	.93
Methylene chloride	12	17	8	8	.71	9.54	1.50
Hexachlorocyclopentadiene	12	8	8	0	.40	2.30	.60
1,1-Dichloroethane	12	0	0	0	.25	.25	.25
1,1-Dichloroethylene	12	0	0	0	.11	.11	.11
Bromodichloromethane	12	0	0	0	.49	.49	.49
Dibromochloromethane	12	0	0	0	.22	.22	.22
Tetrachloroethylene	12	0	0	0	.19	.19	.19
Trichloroethylene	12	0	0	0	.48	.48	.48
Dehydroabietic Acid	11	82	82	82	.60	420.00	83.60
Abietic Acid	11	73	45	36	.60	62.00	8.60
Naphthalene	11	55	27	0	.11	3.31	1.23
Copper	11	55	0	0	.30	1.40	.92
Pimaric Acid	11	36	36	18	.60	12.60	2.40
Levopimaric Acid	11	27	27	27	.80	50.00	7.20
Isopimaric Acid	11	27	18	9	.80	5.60	1.60
Oleic Acid	11	18	18	18	.60	8.40	1.80
Phenol	11	18	0	0	.16	1.87	.58
Neoabietic Acid	11	9	9	0	.60	2.80	.80
Pentachlorophenol	11	9	9	0	.14	2.23	.33
Chlorodehydroabietic Acid	11	9	0	0	.80	1.40	.80
m-Cresol	11	9	0	0	.13	1.18	.34
p-Cresol	11	9	0	0	.13	1.97	.34
2-Methylnaphthalene	11	0	0	0	.10	.36	.12
Chromium	11	0	0	0	.10	.45	.16
Octachlorodibenzo-p-dioxin	6	17	17	0	.67	3.33	1.10
Total H6CDF	6	0	0	0	.75	.75	.75

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR SULPHATE (KRAFT) SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.16 JAMES RIVER-MARATHON LTD.

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION >RMDL	>2RMDL	>5RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Aluminum	52	100	100	98	3.33	20.33	9.04
Zinc	51	96	94	75	1.00	49.00	6.80
Ammonia plus Ammonium	12	100	100	100	6.08	14.04	9.94
Chlorodehydroabietic Acid	12	100	100	100	19.20	124.80	39.80
Chloroform	12	100	100	100	26.71	2,428.57	1,102.88
Abietic Acid	12	100	100	92	4.80	68.00	21.60
Oleic Acid	12	100	100	92	3.00	66.80	22.60
Levopimaric Acid	12	100	100	83	3.40	19.20	10.00
Octachlorodibenzo-p-dioxin	12	100	100	83	4.00	46.67	14.00
Isopimaric Acid	12	100	100	75	3.20	21.20	9.80
Sulphide	12	100	100	75	2.50	525.00	60.50
Total Kjeldahl nitrogen	12	100	100	75	3.64	9.90	5.90
Pimaric Acid	12	100	100	42	2.40	11.20	5.80
Total TCDF	12	100	83	67	1.13	106.67	18.93
Neoabietic Acid	12	100	83	33	1.60	90.40	11.00
Total PCDF	12	75	67	50	.20	80.00	11.40
Total H7CDD	12	58	33	17	.33	25.00	3.57
Total TCDD	12	58	33	17	.25	7.00	2.20
Total PCDD	12	42	25	0	.15	4.40	1.30
Nickel	12	42	17	0	1.00	4.50	1.50
Total H6CDF	12	33	33	25	.15	15.50	2.70
Octachlorodibenzofuran	12	33	25	25	.23	5.67	1.77
Camphene	12	33	8	0	.14	2.34	.68
1,2,4-Trichlorobenzene	12	25	25	17	.60	357.00	31.00
Total H6CDD	12	25	25	8	.10	9.00	1.33
1,2,3,5-Tetrachlorobenzene	12	25	17	17	.50	27.00	4.00
Total H7CDF	12	25	17	17	.17	5.67	1.40
Hexachlorobutadiene	12	25	17	8	.20	5.00	.90
2,4,5-Trichlorotoluene	12	17	17	17	.20	8.00	1.20
1,2,3,4-Tetrachlorobenzene	12	17	17	8	.90	17.70	2.60
2,3,5-Trichlorophenol	12	17	17	8	.31	10.77	1.45
Nitrate+Nitrite	12	17	17	8	1.00	148.80	13.47
2,3,7,8 TCDD	12	17	17	0	.20	4.00	.95
Fluoranthene	12	8	8	8	1.00	6.00	1.42
1,2,3-Trichlorobenzene	12	8	8	0	.80	3.00	1.00
Hexachloroethane	12	8	8	0	.10	2.00	.30
Phenol	12	8	8	0	.10	4.12	.56
2,4-Dichlorophenol	12	8	0	0	.12	1.18	.21
Pentachlorobenzene	12	8	0	0	.20	1.00	.30
2,4,6-Trichlorophenol	12	0	0	0	.15	1.00	.22
Acenaphthylene	12	0	0	0	.29	1.00	.35
Benzo(g,h,i)perylene	12	0	0	0	1.00	1.00	1.00
Benzo(k)fluoranthene	12	0	0	0	1.00	1.00	1.00
Chrysene	12	0	0	0	1.00	1.00	1.00
Dibenz(a,h)anthracene	12	0	0	0	.23	1.00	.29
Naphthalene	12	0	0	0	.37	1.00	.43
Octachlorostyrene	12	0	0	0	.20	.20	.20
Phenanthrene	12	0	0	0	1.00	1.00	1.00
Pyrene	12	0	0	0	1.00	1.00	1.00
Thallium	12	0	0	0	1.00	1.00	1.00
m-Cresol	12	0	0	0	.88	1.00	.89
o-Cresol	12	0	0	0	.19	1.00	.26
p-Cresol	12	0	0	0	.14	1.00	.21
Total phosphorus	11	100	100	55	3.10	9.70	5.92

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR SULPHATE (KRAFT) SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.16 (cont'd) JAMES RIVER-MARATHON LTD.

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
Vanadium	11	36	9	0	.33	2.00	1.03
Hexachlorocyclopentadiene	11	27	27	27	.40	15.00	3.20
Hexachlorobenzene	11	18	18	18	.30	1,864.90	170.30
1,2,4,5-Tetrachlorobenzene	11	18	18	9	.50	27.00	3.10
Copper	10	70	30	20	1.00	9.00	2.70
Mercury	9	56	33	11	1.00	34.00	4.89
Toluene	9	22	22	22	.80	11.98	2.98
Methylene chloride	9	11	11	11	.25	307.69	34.41
Styrene	9	11	11	11	.80	6.20	1.40
Benzene	9	11	11	0	.40	3.20	.78
Molybdenum	9	11	11	0	.45	3.00	1.16
1,2-Dichloroethane	9	0	0	0	.49	1.00	.54
Chromium	8	38	0	0	.20	1.00	.90
Bromodichloromethane	8	0	0	0	.50	.52	.51

NOTE: (1) Concentration Ratio = concentration divided by
Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR DEINKING/BOARD/FINE PAPERS/TISSUE SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.17 KIMBERLY-CLARK CANADA INC., HUNTSVILLE

	NUMBER OF	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
PARAMETER	OBSERVATIONS	>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
Aluminum	23	61	22	4	1.00	6.33	1.64
Zinc	23	43	26	0	1.00	4.00	1.57
Total Kjeldahl nitrogen	6	100	100	100	8.60	17.40	12.33
Chloroform	6	100	100	33	2.00	9.00	5.10
Total phosphorus	6	100	67	0	1.00	3.00	2.20
Copper	6	67	17	0	1.00	3.00	1.33
Nitrate+Nitrite	6	33	17	0	.20	3.92	1.09
Dehydroabietic Acid	6	17	17	0	1.00	2.40	1.20
Oleic Acid	6	17	17	0	1.00	4.20	1.60
Chromium	6	17	0	0	1.00	1.00	1.00
1,2,3,4-Tetrachlorobenzene	6	0	0	0	.50	.50	.50
1,2,3-Trichlorobenzene	6	0	0	0	.50	.50	.50
1,2,4-Trichlorobenzene	6	0	0	0	.50	.50	.50
2-Methylnaphthalene	6	0	0	0	.91	.91	.91
Abietic Acid	6	0	0	0	1.00	1.00	1.00
Ammonia plus Ammonium	6	0	0	0	.40	.64	.46
Chlorodehydroabietic Acid	6	0	0	0	1.00	1.00	1.00
Hexachlorocyclopentadiene	6	0	0	0	1.00	1.00	1.00
Isopimaric Acid	6	0	0	0	1.00	1.00	1.00
Levopimaric Acid	6	0	0	0	1.00	1.00	1.00
Naphthalene	6	0	0	0	.62	.62	.62
Neoabietic Acid	6	0	0	0	1.00	1.00	1.00
Pentachlorophenol	6	0	0	0	.77	.77	.77
Phenol	6	0	0	0	.42	.42	.42
Pimaric Acid	6	0	0	0	1.00	1.00	1.00
m-Cresol	5	0	0	0	.29	.29	.29
p-Cresol	5	0	0	0	.29	.29	.29
Octachlorodibenzo-p-dioxin	4	100	100	25	2.37	19.00	6.67
Total H6CDF	4	0	0	0	1.00	1.00	1.00
Methylene chloride	3	33	33	33	.77	6.54	2.69
1,1-Dichloroethane	3	0	0	0	.25	.25	.25
1,1-Dichloroethylene	3	0	0	0	.18	.18	.18
1,2-Dichloroethane	3	0	0	0	.25	.25	.25
Benzene	3	0	0	0	.20	.20	.20
Bromodichloromethane	3	0	0	0	.25	.25	.25
Dibromochloromethane	3	0	0	0	.91	.91	.91
Tetrachloroethylene	3	0	0	0	.45	.45	.45
Toluene	3	0	0	0	.40	.40	.40
Trichloroethylene	3	0	0	0	.11	.11	.11
m-Xylene and p-Xylene	3	0	0	0	.18	.18	.18
o-Xylene	3	0	0	0	.40	.40	.40

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS
FOR DEINKING/BOARD/FINE PAPERS/TISSUE SUBCATEGORY
CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY
AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.18 KIMBERLY-CLARK CANADA INC., ST. CATHARINES

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
Aluminum	50	100	84	24	1.47	25.40	3.93
Zinc	50	72	54	38	.40	1,030.00	97.34
Toluene	12	92	67	17	.28	12.00	3.68
Dehydroabietic Acid	12	75	75	58	.40	3,600.00	316.00
Oleic Acid	12	67	67	67	.80	3,400.00	296.20
Pimaric Acid	12	67	50	33	.80	2,000.00	170.40
Naphthalene	12	67	50	17	.10	7.62	2.75
Total phosphorus	12	67	33	17	.40	13.70	2.62
Abietic Acid	12	58	50	25	.60	26.00	5.20
Isopimaric Acid	12	58	42	33	.40	1,400.00	119.80
Phenol	12	58	33	0	.21	4.46	1.55
Methylene chloride	12	50	33	8	.15	7.31	1.69
1,1-Dichloroethane	12	50	17	0	.10	2.80	1.15
Trichloroethylene	12	42	25	17	.10	17.53	2.84
Tetrachloroethylene	12	42	17	8	.14	7.82	1.46
Levopimaric Acid	12	33	17	17	.00	9.60	2.00
Chloroform	12	25	17	0	.11	2.34	.70
Copper	12	25	8	0	.10	2.04	.73
Hexachlorocyclopentadiene	12	17	17	17	1.00	73.00	9.10
m-Xylene and p-Xylene	12	17	8	0	.13	4.03	.84
p-Cresol	12	17	0	0	.10	1.94	.44
Neoabietic Acid	12	8	8	0	.00	2.00	.60
o-Xylene	12	8	8	0	.10	3.28	.64
1,1-Dichloroethylene	12	0	0	0	.10	.10	.10
1,2,3,4-Tetrachlorobenzene	12	0	0	0	.20	1.00	.70
1,2,3-Trichlorobenzene	12	0	0	0	.20	1.00	.70
1,2,4-Trichlorobenzene	12	0	0	0	.20	1.00	.70
1,2-Dichloroethane	12	0	0	0	.10	.35	.13
Benzene	12	0	0	0	.16	.32	.17
Bromodichloromethane	12	0	0	0	.10	1.00	.72
Chlorodehydroabietic Acid	12	0	0	0	.00	.80	.60
Chromium	12	0	0	0	.10	.21	.15
Dibromochloromethane	12	0	0	0	.11	.35	.13
Pentachlorophenol	12	0	0	0	.10	.31	.24
m-Cresol	12	0	0	0	.10	.84	.25
Total Kjeldahl nitrogen	11	100	100	36	2.00	8.00	4.29
Nitrate+Nitrite	11	9	0	0	.48	1.20	.62
Ammonia plus Ammonium	11	0	0	0	.19	.72	.32
Total H6CDF	4	0	0	0	.50	.75	.55

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR SULPHATE (KRAFT) SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.19 KIMBERLY-CLARK CANADA INC., TERRACE BAY

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
Aluminum	53	100	100	100	11.00	23.33	17.09
Total Kjeldahl nitrogen	53	100	100	100	5.00	19.20	9.32
Total phosphorus	53	100	100	60	3.00	8.00	4.89
Zinc	53	98	98	98	1.00	18.00	8.96
Ammonia plus Ammonium	53	89	74	25	.40	8.40	3.69
VSS	52	100	96	19	1.50	7.75	3.91
Nitrate+Nitrite	43	26	16	9	.40	448.00	11.92
Chloroform	12	100	100	100	6.29	34.71	17.10
Total TCDF	12	100	100	100	10.67	44.00	21.07
Octachlorodibenzo-p-dioxin	12	100	100	42	2.33	63.33	10.23
Total TCDD	12	100	83	67	2.00	46.50	15.90
Chromium	12	92	92	75	1.00	15.00	7.42
Total PCDF	12	83	50	8	1.00	5.67	2.53
2,4,6-Trichlorophenol	12	75	67	33	.77	6.77	3.72
2,4-Dichlorophenol	12	67	17	0	.59	3.00	1.39
2,3,7,8 TCDD	12	67	0	0	1.00	2.00	1.50
Total PCDD	12	58	58	0	1.00	3.00	2.15
Octachlorodibenzofuran	12	58	0	0	1.00	2.00	1.57
Total H6CDD	12	58	0	0	1.00	2.00	1.57
Total H7CDF	12	58	0	0	1.00	1.33	1.17
Sulphide	12	50	33	25	.50	207.00	19.15
Abietic Acid	12	50	25	17	1.00	21.40	3.80
Oleic Acid	12	33	25	8	1.00	5.80	1.60
Chlorodehydroabietic Acid	12	33	8	0	1.00	2.60	1.20
Copper	12	33	8	0	1.00	2.00	1.08
Mercury	12	33	0	0	1.00	1.20	1.02
Nickel	12	33	0	0	.50	1.00	.67
1,2,4,5-Tetrachlorobenzene	12	25	25	8	.50	5.70	1.20
Pimaric Acid	12	17	0	0	1.00	1.20	1.00
Neoabietic Acid	12	8	8	8	1.00	13.40	2.00
Isopimaric Acid	12	8	0	0	1.00	1.80	1.00
Total H6CDF	12	8	0	0	1.00	1.95	1.10
Total H7CDD	12	8	0	0	.67	1.67	.93
1,2,3,4-Tetrachlorobenzene	12	0	0	0	.50	.50	.50
1,2,3,5-Tetrachlorobenzene	12	0	0	0	.50	.50	.50
1,2,3-Trichlorobenzene	12	0	0	0	.50	.50	.50
1,2,4-Trichlorobenzene	12	0	0	0	.50	.50	.50
2,3,5-Trichlorophenol	12	0	0	0	.77	.77	.77
2,4,5-Trichlorotoluene	12	0	0	0	.50	.50	.50
Acenaphthylene	12	0	0	0	.71	.71	.71
Benzo(g,h,i)perylene	12	0	0	0	.71	.71	.71
Benzo(k)fluoranthene	12	0	0	0	.71	.71	.71
Camphene	12	0	0	0	.57	.57	.57
Chrysene	12	0	0	0	1.00	1.00	1.00
Dibenz(a,h)anthracene	12	0	0	0	.77	.77	.77
Fluoranthene	12	0	0	0	1.00	1.00	1.00
Hexachlorobenzene	12	0	0	0	.50	.50	.50
Hexachlorobutadiene	12	0	0	0	.50	.50	.50
Hexachlorocyclopentadiene	12	0	0	0	1.00	1.00	1.00
Hexachloroethane	12	0	0	0	.50	.50	.50
Levopimaric Acid	12	0	0	0	1.00	1.00	1.00
Molybdenum	12	0	0	0	1.00	1.00	1.00
Naphthalene	12	0	0	0	.62	.62	.62
Octachlorostyrene	12	0	0	0	.50	.50	.50

DETECTION FREQUENCIES AND CONCENTRATION RATIOS
FOR SULPHATE (KRAFT) SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY,
BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.19 (cont'd) KIMBERLY-CLARK CANADA INC., TERRACE BAY

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
Pentachlorobenzene	12	0	0	0	.50	.50	.50
Phenanthrene	12	0	0	0	1.00	1.00	1.00
Phenol	12	0	0	0	.42	.42	.42
Pyrene	12	0	0	0	1.00	1.00	1.00
Thallium	12	0	0	0	1.00	1.00	1.00
Vanadium	12	0	0	0	.67	.67	.67
m-Cresol	12	0	0	0	.29	.29	.29
o-Cresol	12	0	0	0	.27	.27	.27
p-Cresol	12	0	0	0	.29	.29	.29
Toluene	2	50	50	0	.40	2.00	1.20
1,2-Dichloroethane	1	0	0	0	.25	.25	.25
Benzene	1	0	0	0	.20	.20	.20
Bromodichloromethane	1	0	0	0	.25	.25	.25
Methylene chloride	1	0	0	0	.38	.38	.38
Styrene	1	0	0	0	.40	.40	.40

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CORRUGATING SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.20a MACMILLAN BLOEDEL LTD.
Control Point 1200

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION >RMDL	>2RMDL	>5RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Zinc	50	100	100	98	2.90	589.40	96.11
Aluminum	50	96	96	86	.67	53.33	12.59
Total phosphorus	12	100	100	100	11.80	34.50	20.64
Total Kjeldahl nitrogen	12	100	100	92	2.98	99.68	53.07
Cadmium	12	100	100	83	2.50	70.00	18.02
Nickel	12	100	75	25	1.00	6.00	3.18
Lead	12	92	75	0	.37	4.00	2.42
Cobalt	12	92	58	0	.50	4.00	2.23
Ammonia plus Ammonium	12	83	83	83	.80	109.20	23.21
Isopimaric Acid	12	83	83	75	1.00	767.80	121.40
Pimaric Acid	12	75	75	75	1.00	318.20	39.20
Copper	12	75	75	33	1.00	11.00	4.25
Vanadium	12	75	50	8	.67	6.00	2.29
Chlorodehydroabietic Acid	12	58	58	58	1.00	116.00	29.80
Levopimaric Acid	12	58	58	58	1.00	182.00	45.00
Oleic Acid	12	58	58	50	1.00	730.00	165.40
Neoabietic Acid	12	50	50	42	1.00	48.20	15.80
Thallium	12	42	33	8	.67	5.33	1.67
Chromium	12	33	25	8	.50	6.40	1.51
Abietic Acid	12	25	25	25	1.00	49.60	9.00
Molybdenum	12	25	25	0	.50	2.50	.92
Phenol	12	17	17	8	.42	208.33	17.92
Chloroform	12	0	0	0	.57	.57	.57
o-Cresol	12	0	0	0	.65	.65	.65
Octachlorodibenzo-p-dioxin	2	0	0	0	.67	.67	.67
Octachlorodibenzofuran	2	0	0	0	.33	.33	.33
Total H6CDD	2	0	0	0	.67	.67	.67
Total H7CDD	2	0	0	0	.67	.67	.67
Total H7CDF	2	0	0	0	.33	.33	.33
Total TCDF	2	0	0	0	.67	.67	.67

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CORRUGATING SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.20b MACMILLAN BLOEDEL LTD.
Control Point 1300

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
Aluminum	50	100	100	100	6.33	178.00	54.03
Zinc	50	100	100	100	22.40	688.80	81.89
Nitrate+Nitrite	31	100	100	100	252.04	2,506.68	989.66
Total phosphorus	31	100	100	100	9.50	219.50	80.69
Ammonia plus Ammonium	31	94	94	94	.80	322.44	73.09
Total Kjeldahl nitrogen	31	94	94	90	1.00	364.52	131.88
VSS	25	100	100	100	19.90	71.40	38.90
Cadmium	12	92	83	67	.50	21.00	8.49
Pimaric Acid	12	75	75	75	1.00	129.20	28.80
Copper	12	75	75	67	1.00	14.00	6.16
Levopimaric Acid	12	75	67	67	1.00	2,239.40	286.00
Nickel	12	75	50	25	.50	11.50	3.30
Cobalt	12	75	42	0	.50	4.50	1.83
Isopimaric Acid	12	67	67	67	1.00	499.80	121.40
Oleic Acid	12	67	67	58	1.00	108.60	19.40
Vanadium	12	67	33	0	.67	4.00	1.81
Lead	12	58	50	0	.33	4.33	1.69
Thallium	12	50	33	8	.67	7.67	1.78
Abietic Acid	12	42	42	42	1.00	19.40	6.00
Chromium	12	42	25	8	.50	6.55	1.54
Molybdenum	12	42	17	0	.50	3.00	1.08
Chlorodehydroabietic Acid	12	33	33	33	1.00	40.20	6.80
Neoabietic Acid	12	17	17	8	1.00	87.00	8.20
Phenol	12	17	8	8	.42	12.50	1.49
Chloroform	12	0	0	0	.57	.57	.57
o-Cresol	12	0	0	0	.65	.65	.65
Octachlorodibenzo-p-dioxin	2	0	0	0	.67	.67	.67
Octachlorodibenzofuran	2	0	0	0	.33	.33	.33
Total H6CDD	2	0	0	0	.67	.67	.67
Total H7CDD	2	0	0	0	.67	.67	.67
Total H7CDF	2	0	0	0	.33	.33	.33
Total TCDF	2	0	0	0	.67	.67	.67

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR SULPHATE (KRAFT) SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.21 MALETTE KRAFT PULP AND POWER

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION >RMDL	>2RMDL	>5RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Aluminum	46	93	93	93	.13	250.00	110.74
Zinc	46	93	93	85	.10	25.00	11.94
Total phosphorus	27	100	100	15	2.00	9.50	3.94
Total Kjeldahl nitrogen	27	100	100	11	2.76	5.60	4.02
Ammonia plus Ammonium	27	93	74	0	.58	4.60	2.96
Nitrate+Nitrite	27	30	22	11	.10	10.00	1.52
Chlorodehydroabietic Acid	12	100	100	100	8.40	78.00	19.80
Isopimaric Acid	12	100	100	100	5.20	700.00	88.40
Sulphide	12	100	92	42	1.30	500.00	88.30
Abietic Acid	12	92	92	83	.60	700.00	159.40
Pimaric Acid	12	92	92	83	.60	166.00	41.40
Phenol	12	83	83	75	.10	18.75	9.74
m-Cresol	12	83	83	67	.10	16.47	7.01
Neoabietic Acid	12	75	50	50	.60	620.00	74.20
2,4-Dichlorophenol	12	67	42	0	.10	3.59	1.71
2,4,6-Trichlorophenol	12	58	58	42	.10	8.62	3.50
2,4,5-Trichlorotoluene	12	58	25	8	.10	5.50	1.40
Levopimaric Acid	12	50	50	25	.80	720.00	63.20
Camphene	12	50	33	33	.10	9.71	2.71
1,2,4-Trichlorobenzene	12	42	17	8	.10	6.40	1.40
p-Cresol	12	33	0	0	.10	1.66	.81
Oleic Acid	12	25	25	25	.60	156.00	18.20
Hexachlorocyclopentadiene	12	25	8	0	.40	3.20	.80
o-Cresol	12	25	0	0	.10	1.38	.60
Octachlorodibenzo-p-dioxin	12	17	17	0	.67	3.00	1.03
Benzo(k)fluoranthene	12	8	0	0	.83	1.43	.88
Fluoranthene	12	8	0	0	.32	1.00	.38
Pyrene	12	8	0	0	.65	1.75	.75
1,2,3,4-Tetrachlorobenzene	12	0	0	0	.10	.10	.10
1,2,3,5-Tetrachlorobenzene	12	0	0	0	.20	.20	.20
1,2,3-Trichlorobenzene	12	0	0	0	.30	.30	.30
1,2,4,5-Tetrachlorobenzene	12	0	0	0	.10	.10	.10
2,3,5-Trichlorophenol	12	0	0	0	.10	.10	.10
Acenaphthylene	12	0	0	0	.11	.29	.13
Chrysene	12	0	0	0	.90	.90	.90
Hexachlorobenzene	12	0	0	0	.40	.70	.40
Hexachlorobutadiene	12	0	0	0	.20	.20	.20
Hexachloroethane	12	0	0	0	.20	.50	.20
Naphthalene	12	0	0	0	.10	.62	.25
Octachlorostyrene	12	0	0	0	.10	.10	.10
Pentachlorobenzene	12	0	0	0	.10	.10	.10
Phenanthrene	12	0	0	0	.50	.75	.54
Chloroform	11	91	91	91	.79	557.14	220.53
Toluene	11	73	64	55	.48	10.20	4.83
Styrene	11	64	55	0	.48	4.80	2.14
1,2-Dichloroethane	11	55	9	0	.64	2.50	.98
Methylene chloride	11	45	36	27	.50	17.69	3.78
Benzene	11	36	18	9	.38	76.00	7.68
Benzo(g,h,i)perylene	11	9	9	9	.99	14.29	2.19
Bromodichloromethane	11	0	0	0	.49	.49	.49
Mercury	10	30	10	0	.56	2.00	.87
Total H6CDD	10	10	10	0	.73	3.33	1.00
Total H7CDD	10	10	0	0	.57	1.53	.67
2,3,7,8 TCDD	10	0	0	0	.55	.55	.55

DETECTION FREQUENCIES AND CONCENTRATION RATIOS
FOR SULPHATE (KRAFT) SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.21 (cont'd) MALETTE KRAFT PULP AND POWER

PARAMETER	NUMBER OF OBSERVATIONS	>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
Dibenz(a,h)anthracene	10	0	0	0	.98	.98	.98
Octachlorodibenzofuran	10	0	0	0	.73	.73	.73
Total H6CDF	10	0	0	0	.75	.75	.75
Total H7CDF	10	0	0	0	.67	.67	.67
Total PCDF	10	0	0	0	.87	.87	.87
Total TCDF	9	78	67	67	.53	36.00	10.47
Copper	9	44	11	0	.10	2.30	.90
Chromium	9	33	22	11	.10	9.50	1.77
Total PCDD	9	11	11	11	.95	10.00	1.95
Nickel	7	14	14	14	.10	8.00	1.46
Molybdenum	7	0	0	0	.10	.60	.28
Thallium	6	0	0	0	.10	.90	.68
Vanadium	6	0	0	0	.10	.33	.16
Total TCDD	5	0	0	0	.55	.55	.55

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS
FOR DEINKING/BOARD/FINE PAPERS/TISSUE SUBCATEGORY
CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY
AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.22 NORANDA FOREST INC., RECYCLED PAPERS

	NUMBER OF	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
PARAMETER	OBSERVATIONS	>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
Aluminum	46	100	100	100	30.67	610.00	151.18
Zinc	46	100	98	83	1.20	36.00	9.75
VSS	46	100	93	9	1.40	13.62	3.41
Total Kjeldahl nitrogen	46	98	74	7	.32	6.60	2.73
Nitrate+Nitrite	46	93	52	0	.18	3.88	2.11
Ammonia plus Ammonium	46	13	2	0	.10	2.72	.51
Copper	11	73	18	0	.30	2.80	1.28
Adsorbable Organic Halide	10	100	100	100	5.40	408.00	105.06
Chloroform	10	100	100	100	26.29	342.86	144.77
Dehydroabietic Acid	10	100	100	100	10.80	130.00	64.60
Bromodichloromethane	10	100	100	80	2.34	16.75	7.43
Hexachlorocyclopentadiene	10	80	70	70	.60	43.40	17.30
o-Xylene	10	70	40	20	.38	7.80	2.66
Benzene	10	50	40	20	.38	20.60	4.42
m-Xylene and p-Xylene	10	50	20	10	.19	5.82	1.67
Dibromochloromethane	10	50	20	0	.22	2.64	1.17
1,2-Dichloroethane	10	50	0	0	.64	1.02	.83
Total phosphorus	10	40	0	0	.52	1.86	.99
Chlorodehydroabietic Acid	10	30	20	20	.80	6.60	2.00
Oleic Acid	10	20	20	10	.60	5.00	1.20
Toluene	10	20	20	0	.48	2.78	.91
Chromium	10	20	10	10	.20	9.10	1.48
m-Cresol	10	20	0	0	.13	1.79	.51
Methylene chloride	10	10	10	10	.71	10.08	1.67
1,2,3,4-Tetrachlorobenzene	10	10	0	0	.10	1.80	.30
Levopimaric Acid	10	10	0	0	.80	1.60	.80
1,1-Dichloroethane	10	0	0	0	.25	.25	.25
1,1-Dichloroethylene	10	0	0	0	.11	.75	.19
1,2,3-Trichlorobenzene	10	0	0	0	.20	.30	.30
1,2,4-Trichlorobenzene	10	0	0	0	.20	.70	.30
2-Methylnaphthalene	10	0	0	0	.10	.10	.10
Abietic Acid	10	0	0	0	.60	.60	.60
Isopimaric Acid	10	0	0	0	.80	.80	.80
Naphthalene	10	0	0	0	.11	.12	.11
Neoabietic Acid	10	0	0	0	.60	.60	.60
Pentachlorophenol	10	0	0	0	.14	.14	.14
Phenol	10	0	0	0	.16	.62	.21
Pimaric Acid	10	0	0	0	.60	.60	.60
Tetrachloroethylene	10	0	0	0	.19	.89	.36
Trichloroethylene	10	0	0	0	.48	.48	.48
p-Cresol	10	0	0	0	.13	.13	.13
Octachlorodibenzo-p-dioxin	9	56	44	11	.67	13.00	3.07
Total H6CDF	9	11	11	11	.75	25.00	3.45

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR SULPHITE/MECHANICAL SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.23 QUEBEC AND ONTARIO PAPER COMPANY LTD.

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
Zinc	34	100	100	94	3.60	430.00	28.93
Total Kjeldahl nitrogen	34	100	97	59	1.78	18.80	7.34
VSS	34	100	94	21	1.60	8.40	3.76
Aluminum	34	97	94	85	.32	166.67	22.28
Ammonia plus Ammonium	34	79	68	47	.10	34.80	7.34
Total phosphorus	34	79	59	41	.25	11.60	4.27
Nitrate+Nitrite	34	44	18	0	.42	4.60	1.26
Copper	8	100	50	13	1.00	6.00	2.31
1,2-Dichloroethane	7	71	0	0	.64	1.02	.91
Chloroform	7	57	43	0	.73	4.43	2.06
Toluene	7	43	43	43	.48	50.00	13.13
Methylene chloride	7	43	14	14	.71	9.69	2.19
Chlorodehydroabietic Acid	7	29	29	0	.80	2.40	1.20
2,4,5-Trichlorotoluene	7	29	14	0	.10	2.00	.60
Benzene	7	29	14	0	.38	2.40	.84
Chloromethane	7	29	14	0	.17	3.89	.86
1,2,4-Trichlorobenzene	7	29	0	0	.20	1.20	.60
Oleic Acid	7	14	14	14	.60	14.80	2.60
Bromodichloromethane	7	14	14	0	.49	2.00	.70
Isopimaric Acid	7	14	14	0	.80	3.60	1.20
Styrene	7	14	0	0	.48	1.56	.63
1,2,3-Trichlorobenzene	7	0	0	0	.30	.30	.30
Abietic Acid	7	0	0	0	.60	.60	.60
Benzo(g,h,i)perylene	7	0	0	0	.99	.99	.99
Benzo(k)fluoranthene	7	0	0	0	.83	.83	.83
Camphene	7	0	0	0	.10	.10	.10
Dibenz(a,h)anthracene	7	0	0	0	.98	.98	.98
Levopimaric Acid	7	0	0	0	.80	.80	.80
Neoabietic Acid	7	0	0	0	.60	.60	.60
Pentachlorobenzene	7	0	0	0	.10	.10	.10
Phenol	7	0	0	0	.16	.21	.17
Pimaric Acid	7	0	0	0	.60	.60	.60
m-Cresol	7	0	0	0	.13	.18	.13
o-Xylene	7	0	0	0	.38	.52	.40
p-Cresol	7	0	0	0	.13	.13	.13
Octachlorodibenzo-p-dioxin	1	0	0	0	.67	.67	.67
Octachlorodibenzofuran	1	0	0	0	.73	.73	.73

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR SULPHITE/MECHANICAL SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.24 ST. MARYS PAPER INC.

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION >RMDL	>2RMDL	>5RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Aluminum	51	100	100	100	8.00	353.33	79.88
Zinc	51	98	98	51	.10	19.10	5.75
Abietic Acid	13	100	100	100	9.60	300.00	142.20
Pimaric Acid	13	100	100	100	5.20	82.00	39.20
Isopimaric Acid	13	92	92	92	.80	338.00	119.20
Levopimaric Acid	13	92	92	92	.80	172.00	62.00
Neoabietic Acid	13	92	92	92	.60	142.00	59.20
Oleic Acid	13	54	54	31	.60	80.00	12.00
Chlorodehydroabietic Acid	13	23	23	8	.80	5.20	1.40
Total phosphorus	12	100	100	100	5.40	13.30	8.86
Total Kjeldahl nitrogen	12	100	67	0	1.64	3.92	2.35
Toluene	12	92	75	50	.48	14.80	5.61
Methylene chloride	12	67	58	50	.71	146.15	18.84
p-Cresol	12	67	17	8	.13	8.00	1.75
Benzene	12	58	58	25	.38	7.00	2.67
Chloroform	12	58	42	0	.79	3.71	1.90
Phenol	12	42	25	0	.16	4.79	1.39
Chloromethane	12	33	33	8	.18	89.19	8.38
1,2-Dichloroethane	12	33	0	0	.64	1.02	.77
m-Cresol	12	25	0	0	.13	1.59	.68
Ammonia plus Ammonium	12	8	8	0	.19	2.40	.48
1,2,3-Trichlorobenzene	12	0	0	0	.30	.30	.30
1,2,4-Trichlorobenzene	12	0	0	0	.20	.80	.30
2,4,5-Trichlorotoluene	12	0	0	0	.10	.40	.10
Bromodichloromethane	12	0	0	0	.49	.49	.49
Camphene	12	0	0	0	.10	.20	.11
Nitrate+Nitrite	12	0	0	0	.18	.45	.27
Pentachlorobenzene	12	0	0	0	.10	.10	.10
Styrene	12	0	0	0	.48	.96	.52
o-Xylene	12	0	0	0	.38	.66	.42
Benzo(k)fluoranthene	11	0	0	0	.83	.83	.83
Copper	10	60	0	0	.30	1.90	1.06
Benzo(g,h,i)perylene	10	0	0	0	.99	.99	.99
Dibenz(a,h)anthracene	10	0	0	0	.98	.98	.98
Octachlorodibenzo-p-dioxin	6	83	83	33	.67	14.33	5.43
Octachlorodibenzofuran	6	17	0	0	.73	1.27	.83

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR SULPHITE/MECHANICAL SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.25 SPRUCE FALLS POWER AND PAPER COMPANY LTD.

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
Zinc	53	100	100	100	9.00	16.00	11.70
Aluminum	53	100	100	79	2.33	23.67	8.38
Abietic Acid	12	100	100	100	109.60	575.60	275.60
Isopimaric Acid	12	100	100	100	38.60	181.20	93.40
Neoabietic Acid	12	100	100	100	71.20	771.20	321.80
Oleic Acid	12	100	100	92	3.40	174.40	62.60
Total phosphorus	12	100	92	0	1.60	4.50	2.82
Copper	12	100	75	0	1.00	4.00	2.33
Total Kjeldahl nitrogen	12	92	92	8	.46	25.20	5.16
Pimaric Acid	12	92	83	83	1.00	51.40	17.20
Chlorodehydroabietic Acid	12	58	42	42	1.00	14.40	4.60
Phenol	12	33	8	0	.42	2.04	.83
Camphene	12	8	8	0	.51	2.17	.70
Ammonia plus Ammonium	12	0	0	0	.40	.64	.42
Benzo(g,h,i)perylene	12	0	0	0	.71	.71	.71
Benzo(k)fluoranthene	12	0	0	0	.71	.71	.71
Dibenz(a,h)anthracene	12	0	0	0	.77	.77	.77
1,2,3-Trichlorobenzene	11	9	0	0	.50	1.30	.60
1,2,4-Trichlorobenzene	11	0	0	0	.50	.50	.50
2,4,5-Trichlorotoluene	11	0	0	0	.50	.50	.50
Pentachlorobenzene	11	0	0	0	.50	.50	.50
Chloroform	9	100	100	67	2.86	8.71	5.70
m-Cresol	9	0	0	0	.29	.29	.29
p-Cresol	9	0	0	0	.29	.29	.29
Toluene	8	100	100	63	3.20	9.60	6.77
Nitrate+Nitrite	8	0	0	0	.20	.84	.38
Octachlorodibenzo-p-dioxin	6	100	100	83	3.67	26.33	12.60
Octachlorodibenzofuran	6	33	0	0	1.00	1.77	1.23
Specific conductance	1	100	100	100	61.40	61.40	61.40

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR DEINKING/BOARD/FINE PAPERS/TISSUE SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.26 STRATHCONA PAPER COMPANY

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
Total phosphorus	52	100	100	54	2.10	11.20	5.12
Total Kjeldahl nitrogen	52	100	96	96	1.78	35.80	22.95
Aluminum	52	98	98	98	.32	180.00	27.20
VSS	52	98	96	67	.60	16.40	6.26
Ammonia plus Ammonium	52	85	79	56	.19	36.40	9.64
Nitrate+Nitrite	52	2	0	0	.10	1.04	.15
Zinc	50	74	30	8	.10	11.50	2.04
Dehydroabietic Acid	12	92	92	83	.60	350.00	48.40
Chloroform	12	58	50	25	.79	14.29	3.41
p-Cresol	12	50	50	33	.13	18.57	4.67
Phenol	12	50	42	25	.16	10.83	3.20
Methylene chloride	12	50	33	17	.71	230.77	32.89
Oleic Acid	12	42	42	33	.60	39.40	8.00
Toluene	12	42	42	17	.48	12.00	2.74
m-Cresol	12	42	33	0	.13	2.68	.94
1,2-Dichloroethane	12	42	0	0	.64	1.02	.80
Pimaric Acid	12	33	33	25	.60	38.80	5.80
Isopimaric Acid	12	25	25	17	.80	11.80	2.20
Benzene	12	25	17	0	.38	2.94	.89
Neoabietic Acid	12	17	17	8	.60	7.00	1.20
Abietic Acid	12	17	8	8	.60	5.00	1.00
Chlorodehydroabietic Acid	12	8	8	8	.80	5.20	1.20
Levopimaric Acid	12	8	8	8	.80	54.00	5.20
Pentachlorophenol	12	8	8	0	.14	2.69	.35
o-Xylene	12	8	0	0	.38	1.00	.43
1,1-Dichloroethane	12	0	0	0	.25	.25	.25
1,1-Dichloroethylene	12	0	0	0	.11	.11	.11
1,2,3,4-Tetrachlorobenzene	12	0	0	0	.10	.30	.10
1,2,3-Trichlorobenzene	12	0	0	0	.30	.30	.30
1,2,4-Trichlorobenzene	12	0	0	0	.20	.40	.20
2-Methylnaphthalene	12	0	0	0	.10	.10	.10
Bromodichloromethane	12	0	0	0	.49	.49	.49
Dibromochloromethane	12	0	0	0	.22	.22	.22
Hexachlorocyclopentadiene	12	0	0	0	.40	.40	.40
Naphthalene	12	0	0	0	.11	.11	.11
Tetrachloroethylene	12	0	0	0	.19	.19	.19
Trichloroethylene	12	0	0	0	.48	.48	.48
m-Xylene and p-Xylene	12	0	0	0	.19	.73	.27
Copper	11	18	9	0	.30	2.90	.74
Chromium	11	0	0	0	.10	.90	.27
Octachlorodibenzo-p-dioxin	2	0	0	0	.67	.67	.67
Total H6CDF	2	0	0	0	.75	.75	.75

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR DEINKING/BOARD/FINE PAPERS/TISSUE SUBCATEGORY CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY AND SEMI-ANNUALLY IN PROCESS EFFLUENT

Table 2.27 TRENT VALLEY DIVISION (PAPERBOARD INDUSTRIES CORP.)

PARAMETER	NUMBER OF OBSERVATIONS	FREQUENCY OF DETECTION			CONCENTRATION RATIOS (1)		
		>RMDL	>2RMDL	>5RMDL	MINIMUM	MAXIMUM	AVERAGE
Aluminum	51	100	100	100	20.33	660.00	203.48
Zinc	50	100	100	98	4.50	62.00	15.03
1,1-Dichloroethylene	13	92	77	38	.11	1,964.29	161.30
Toluene	13	77	69	46	.48	11.60	4.61
1,2-Dichloroethane	13	54	8	8	.64	37.50	3.65
1,1-Dichloroethane	13	46	23	15	.25	93.75	11.04
Methylene chloride	13	31	31	23	.71	153.85	13.52
Benzene	13	31	23	15	.38	11.20	1.86
Chloroform	13	31	23	8	.79	5.71	1.56
Tetrachloroethylene	13	8	8	0	.19	2.64	.44
Trichloroethylene	13	8	0	0	.48	1.21	.54
o-Xylene	13	8	0	0	.38	1.38	.54
Bromodichloromethane	13	0	0	0	.49	.49	.49
Dibromochloromethane	13	0	0	0	.22	.22	.22
m-Xylene and p-Xylene	13	0	0	0	.19	.84	.32
Dehydroabietic Acid	12	100	100	100	15.40	720.00	129.60
Total Kjeldahl nitrogen	12	100	100	83	4.20	11.80	7.13
Isopimaric Acid	12	100	100	67	2.20	18.00	8.40
Total phosphorus	12	100	75	8	1.51	6.00	3.25
Copper	12	67	25	0	.30	3.40	1.41
Abietic Acid	12	58	58	50	.60	50.00	10.40
Oleic Acid	12	42	42	33	.60	42.00	9.20
Pimaric Acid	12	42	42	8	.60	8.60	2.00
Chlorodehydroabietic Acid	12	33	25	8	.80	7.20	1.80
Naphthalene	12	33	8	0	.11	2.31	.66
Chromium	12	33	0	0	.10	1.50	.72
Levopimaric Acid	12	25	25	25	.80	38.20	7.20
Neoabietic Acid	12	25	17	17	.60	8.40	1.80
Nitrate+Nitrite	12	17	0	0	.10	1.28	.44
Ammonia plus Ammonium	12	8	0	0	.11	1.72	.49
1,2,3,4-Tetrachlorobenzene	12	0	0	0	.10	.10	.10
1,2,3-Trichlorobenzene	12	0	0	0	.30	.30	.30
1,2,4-Trichlorobenzene	12	0	0	0	.20	.90	.50
2-Methylnaphthalene	12	0	0	0	.10	.10	.10
Hexachlorocyclopentadiene	12	0	0	0	.40	.40	.40
Phenol	11	82	82	73	.16	74.17	24.68
m-Cresol	11	73	64	27	.13	11.76	3.88
Pentachlorophenol	11	36	18	0	.14	2.62	.71
p-Cresol	11	27	0	0	.11	1.71	.66
Total H6CDF	2	50	50	50	.75	750.00	375.35
Octachlorodibenzo-p-dioxin	2	50	0	0	.67	1.20	.93

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

APPENDIX H

Detection Frequencies and Concentration Ratios for Candidate Parameters in Process Effluent Travelling Blanks

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS

Table 3.1 ABITIBI-PRICE INC., IROQUOIS FALLS DIVISION

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Chloroform	2	50	.79	6.14	3.46
Dehydroabietic Acid	8	38	.60	5.40	1.80
Benzo(g,h,i)perylene	1	0	.99	.99	.99
Dibenz(a,h)anthracene	1	0	.98	.98	.98
1,2-Dichloroethane	2	50	.64	1.02	.83
Benzo(k)fluoranthene	1	0	.83	.83	.83
Chlorodehydroabietic Acid	2	0	.80	.80	.80
Isopimaric Acid	2	0	.80	.80	.80
Levopimaric Acid	2	0	.80	.80	.80
Methylene chloride	2	0	.71	.71	.71
Abietic Acid	2	0	.60	.60	.60
Neoabietic Acid	2	0	.60	.60	.60
Oleic Acid	2	0	.60	.60	.60
Pimaric Acid	2	0	.60	.60	.60
Bromodichloromethane	2	0	.49	.49	.49
Styrene	2	0	.48	.48	.48
Toluene	2	0	.48	.48	.48
Benzene	2	0	.38	.38	.38
o-Xylene	2	0	.38	.38	.38
Aluminum	2	0	.32	.32	.32
1,2,3-Trichlorobenzene	2	0	.30	.30	.30
Copper	2	0	.30	.30	.30
Zinc	2	0	.30	.30	.30
1,2,4-Trichlorobenzene	2	0	.20	.20	.20
Chloromethane	2	0	.18	.19	.18
Phenol	2	0	.16	.16	.16
m-Cresol	2	0	.13	.13	.13
p-Cresol	2	0	.13	.13	.13
2,4,5-Trichlorotoluene	2	0	.10	.10	.10
Camphene	2	0	.10	.10	.10
Pentachlorobenzene	2	0	.10	.10	.10

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.2a ABITIBI-PRICE INC., FORT WILLIAM DIVISION
Control Point 0100

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Neoabietic Acid	1	100	10.60	10.60	10.60
Oleic Acid	1	100	3.80	3.80	3.80
Levopimaric Acid	1	100	3.40	3.40	3.40
Dehydroabietic Acid	5	40	.60	3.40	1.60
Benzo(g,h,i)perylene	1	0	.99	.99	.99
Dibenz(a,h)anthracene	1	0	.98	.98	.98
Benzo(k)fluoranthene	1	0	.83	.83	.83
Chlorodehydroabietic Acid	1	0	.80	.80	.80
Isopimaric Acid	1	0	.80	.80	.80
Chloroform	1	0	.79	.79	.79
Octachlorodibenzofuran	1	0	.73	.73	.73
Methylene chloride	1	0	.71	.71	.71
Octachlorodibenzo-p-dioxin	1	0	.67	.67	.67
1,2-Dichloroethane	1	0	.64	.64	.64
Abietic Acid	1	0	.60	.60	.60
Pimaric Acid	1	0	.60	.60	.60
Bromodichloromethane	1	0	.49	.49	.49
Styrene	1	0	.48	.48	.48
Toluene	1	0	.48	.48	.48
Benzene	1	0	.38	.38	.38
o-Xylene	1	0	.38	.38	.38
Aluminum	1	0	.32	.32	.32
1,2,3-Trichlorobenzene	1	0	.30	.30	.30
Copper	1	0	.30	.30	.30
Zinc	1	0	.30	.30	.30
1,2,4-Trichlorobenzene	1	0	.20	.20	.20
Chloromethane	1	0	.18	.18	.18
Phenol	1	0	.16	.16	.16
m-Cresol	1	0	.13	.13	.13
p-Cresol	1	0	.13	.13	.13
2,4,5-Trichlorotoluene	1	0	.10	.10	.10
Camphene	2	0	.10	.10	.10
Pentachlorobenzene	1	0	.10	.10	.10

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS
FOR CANDIDATE PARAMETERS IN PROCESS
EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.2b ABITIBI-PRICE INC., FORT WILLIAM DIVISION
Control Point 0100

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
1,2-Dichloroethane	1	100	1.02	1.02	1.02
Benzo(g,h,i)perylene	1	0	.99	.99	.99
Dibenz(a,h)anthracene	1	0	.98	.98	.98
Benzo(k)fluoranthene	1	0	.83	.83	.83
Chloroform	1	0	.79	.79	.79
Octachlorodibenzofuran	1	0	.73	.73	.73
Methylene chloride	1	0	.71	.71	.71
Octachlorodibenzo-p-dioxin	1	0	.67	.67	.67
Dehydroabietic Acid	3	0	.60	.60	.60
Bromodichloromethane	1	0	.49	.49	.49
Styrene	1	0	.48	.48	.48
Toluene	1	0	.48	.48	.48
Benzene	1	0	.38	.38	.38
o-Xylene	1	0	.38	.38	.38
Aluminum	1	0	.32	.32	.32
1,2,3-Trichlorobenzene	1	0	.30	.30	.30
Copper	1	0	.30	.30	.30
Zinc	1	0	.30	.30	.30
1,2,4-Trichlorobenzene	1	0	.20	.20	.20
Chloromethane	1	0	.18	.18	.18
Phenol	1	0	.16	.16	.16
m-Cresol	1	0	.13	.13	.13
p-Cresol	1	0	.13	.13	.13
2,4,5-Trichlorotoluene	1	0	.10	.10	.10
Camphene	1	0	.10	.10	.10
Pentachlorobenzene	1	0	.10	.10	.10

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.3 ABITIBI-PRICE INC., PROVINCIAL PAPERS DIVISION

	NUMBER OF		CONCENTRATION RATIOS (1)		
PARAMETER	OBSERVATIONS	% >RMDL	MINIMUM	MAXIMUM	AVERAGE
Neoabietic Acid	2	50	.60	8.60	4.60
Dehydroabietic Acid	8	38	.60	8.00	3.00
Chloroform	2	50	.79	2.00	1.39
Benzo(g,h,i)perylene	1	0	.99	.99	.99
Dibenz(a,h)anthracene	1	0	.98	.98	.98
1,2-Dichloroethane	2	50	.64	1.02	.83
Benzo(k)fluoranthene	1	0	.83	.83	.83
Chlorodehydroabietic Acid	2	0	.80	.80	.80
Isopimaric Acid	2	0	.80	.80	.80
Levopimaric Acid	2	0	.80	.80	.80
Chloromethane	2	50	.18	1.41	.79
Octachlorodibenzofuran	2	0	.73	.73	.73
Octachlorodibenzo-p-dioxin	2	0	.67	.67	.67
Methylene chloride	2	0	.55	.71	.63
Abietic Acid	2	0	.60	.60	.60
Oleic Acid	2	0	.60	.60	.60
Pimaric Acid	2	0	.60	.60	.60
Bromodichloromethane	2	0	.49	.49	.49
Styrene	2	0	.48	.48	.48
Toluene	2	0	.48	.48	.48
Benzene	2	0	.38	.38	.38
o-Xylene	2	0	.38	.38	.38
Aluminum	2	0	.32	.32	.32
1,2,3-Trichlorobenzene	2	0	.30	.30	.30
Copper	2	0	.30	.30	.30
Zinc	2	0	.30	.30	.30
1,2,4-Trichlorobenzene	2	0	.20	.20	.20
Phenol	2	0	.16	.16	.16
m-Cresol	2	0	.13	.13	.13
p-Cresol	2	0	.13	.13	.13
2,4,5-Trichlorotoluene	2	0	.10	.10	.10
Camphene	2	0	.10	.10	.10
Pentachlorobenzene	2	0	.10	.10	.10

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.4 ABITIBI-PRICE INC., THUNDER BAY DIVISION

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Methylene chloride	2	50	.71	207.69	104.20
Chlorodehydroabietic Acid	2	50	.80	42.00	21.40
Dehydroabietic Acid	8	38	.60	6.80	1.80
Pimaric Acid	2	50	.60	2.20	1.40
Benzo(g,h,i)perylene	1	0	.99	.99	.99
Dibenz(a,h)anthracene	1	0	.98	.98	.98
1,2-Dichloroethane	2	50	.64	1.02	.83
Benzo(k)fluoranthene	1	0	.83	.83	.83
Isopimaric Acid	2	0	.80	.80	.80
Levopimaric Acid	2	0	.80	.80	.80
Chloroform	2	0	.79	.79	.79
Octachlorodibenzofuran	2	0	.73	.73	.73
Aluminum	2	50	.32	1.10	.71
Octachlorodibenzo-p-dioxin	2	0	.67	.67	.67
Abietic Acid	2	0	.60	.60	.60
Neoabietic Acid	2	0	.60	.60	.60
Oleic Acid	2	0	.60	.60	.60
Bromodichloromethane	2	0	.49	.49	.49
Styrene	2	0	.48	.48	.48
Toluene	2	0	.48	.48	.48
Benzene	2	0	.38	.38	.38
o-Xylene	2	0	.38	.38	.38
1,2,3-Trichlorobenzene	2	0	.30	.30	.30
Copper	2	0	.30	.30	.30
Zinc	2	0	.30	.30	.30
1,2,4-Trichlorobenzene	2	0	.20	.20	.20
Chloromethane	2	0	.18	.18	.18
Phenol	2	0	.16	.16	.16
m-Cresol	2	0	.13	.13	.13
p-Cresol	2	0	.13	.13	.13
2,4,5-Trichlorotoluene	2	0	.10	.10	.10
Camphene	2	0	.10	.10	.10
Pentachlorobenzene	2	0	.10	.10	.10

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.5 BEAVER WOOD FIBRE COMPANY

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Zinc	2	50	.30	28.00	14.15
Levopimaric Acid	2	50	.80	25.80	13.40
Isopimaric Acid	2	50	.80	8.60	4.60
Copper	2	50	.30	7.40	3.85
Pimaric Acid	2	50	.60	5.80	3.20
Chlorodehydroabietic Acid	2	50	.80	2.80	1.80
Chloroform	2	0	.79	.79	.79
Toluene	2	0	.48	.86	.67
1,2-Dichloroethane	2	0	.64	.64	.64
Abietic Acid	2	0	.60	.60	.60
Dehydroabietic Acid	2	0	.60	.60	.60
Neoabietic Acid	2	0	.60	.60	.60
Oleic Acid	2	0	.60	.60	.60
Methylene chloride	2	0	.44	.71	.57
Bromodichloromethane	2	0	.49	.49	.49
Trichloroethylene	2	0	.48	.48	.48
Aluminum	2	0	.32	.53	.43
Hexachlorocyclopentadiene	2	0	.40	.40	.40
Benzene	2	0	.38	.38	.38
o-Xylene	2	0	.38	.38	.38
1,2,3-Trichlorobenzene	2	0	.30	.30	.30
m-Xylene and p-Xylene	2	0	.19	.33	.26
1,1-Dichloroethane	2	0	.25	.25	.25
Dibromochloromethane	2	0	.22	.22	.22
1,2,4-Trichlorobenzene	2	0	.20	.20	.20
Tetrachloroethylene	2	0	.19	.19	.19
Phenol	2	0	.16	.16	.16
Pentachlorophenol	2	0	.14	.14	.14
m-Cresol	2	0	.13	.13	.13
p-Cresol	2	0	.13	.13	.13
1,1-Dichloroethylene	2	0	.11	.11	.11
Naphthalene	2	0	.11	.11	.11
1,2,3,4-Tetrachlorobenzene	2	0	.10	.10	.10
2-Methylnaphthalene	2	0	.10	.10	.10
Chromium	2	0	.10	.10	.10

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS
FOR CANDIDATE PARAMETERS IN PROCESS
EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.6 BOISE CASCADE CANADA LTD., FORT FRANCES

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Chloroform	2	50	.94	28.57	14.76
Chlorodehydroabietic Acid	4	50	1.00	25.20	9.00
Methylene chloride	2	50	.98	15.00	7.99
Abietic Acid	4	50	1.00	7.00	2.80
Benzo(g,h,i)perylene	2	100	2.43	2.43	2.43
Dehydroabietic Acid	6	33	1.00	5.80	2.00
Neoabietic Acid	4	50	1.00	2.40	1.60
Oleic Acid	4	50	1.00	3.20	1.60
Pimaric Acid	4	25	1.00	3.20	1.60
Dichlorodehydroabietic Ac.	6	33	1.00	2.40	1.40
Isopimaric Acid	4	25	1.00	2.00	1.20
Bromodichloromethane	2	100	1.19	1.19	1.19
Benzo(k)fluoranthene	2	100	1.14	1.14	1.14
Dibenz(a,h)anthracene	2	100	1.08	1.08	1.08
1,2,3,4-Tetrachlorobenzene	2	0	1.00	1.00	1.00
1,2,3,5-Tetrachlorobenzene	2	0	1.00	1.00	1.00
1,2,3-Trichlorobenzene	2	0	1.00	1.00	1.00
1,2,4,5-Tetrachlorobenzene	2	0	1.00	1.00	1.00
1,2,4-Trichlorobenzene	2	0	1.00	1.00	1.00
2,4,5-Trichlorotoluene	2	0	1.00	1.00	1.00
Hexachlorobenzene	2	0	1.00	1.00	1.00
Hexachlorobutadiene	2	0	1.00	1.00	1.00
Hexachlorocyclopentadiene	2	0	1.00	1.00	1.00
Hexachloroethane	2	0	1.00	1.00	1.00
Levopimaric Acid	4	0	1.00	1.00	1.00
Octachlorostyrene	2	0	1.00	1.00	1.00
Pentachlorobenzene	2	0	1.00	1.00	1.00
Phenanthrene	2	0	1.00	1.00	1.00
Toluene	2	0	.94	1.00	.97
Total PCDD	2	0	.95	.95	.95
Aluminum	2	50	.67	1.20	.93
Total PCDF	2	0	.87	.87	.87
Benzene	2	0	.72	1.00	.86
1,2-Dichloroethane	2	0	.60	1.00	.80
Pyrene	2	0	.75	.75	.75
Styrene	2	0	.50	1.00	.75
Total H6CDF	2	0	.75	.75	.75
Octachlorodibenzofuran	2	0	.73	.73	.73
Total H6CDD	2	0	.73	.73	.73
Chrysene	2	0	.67	.67	.67
Octachlorodibenzo-p-dioxin	2	0	.67	.67	.67
Total H7CDF	2	0	.67	.67	.67
Sulphide	1	0	.60	.60	.60
Total H7CDD	2	0	.57	.57	.57
2,3,7,8 TCDD	2	0	.55	.55	.55
Total TCDD	2	0	.55	.55	.55
Total TCDF	2	0	.53	.53	.53
Copper	2	0	.51	.51	.51
Fluoranthene	2	0	.50	.50	.50
Thallium	2	0	.50	.50	.50
Nickel	2	0	.39	.39	.39
2,3,5-Trichlorophenol	2	0	.31	.31	.31
2,4,6-Trichlorophenol	2	0	.31	.31	.31
Zinc	2	0	.13	.36	.25

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.6 (cont'd) BOISE CASCADE CANADA LTD., FORT FRANCES

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Mercury	2	0	.20	.20	.20
Naphthalene	2	0	.19	.19	.19
2,4-Dichlorophenol	2	0	.18	.18	.18
Acenaphthylene	2	0	.14	.14	.14
Adsorbable Organic Halide	3	0	.12	.12	.12
Molybdenum	2	0	.12	.12	.12
Camphene	2	0	.10	.10	.10
Chromium	2	0	.10	.10	.10
Phenol	2	0	.10	.10	.10
Vanadium	2	0	.10	.10	.10
m-Cresol	2	0	.10	.10	.10
o-Cresol	2	0	.10	.10	.10
p-Cresol	2	0	.10	.10	.10

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.7 BOISE CASCADE CANADA LTD., KENORA

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Abietic Acid	4	25	1.00	14.80	4.40
Benzo(g,h,i)perylene	2	100	2.43	2.43	2.43
Chlorodehydroabietic Acid	4	25	1.00	4.00	1.80
Bromodichloromethane	2	100	1.19	1.19	1.19
Benzo(k)fluoranthene	2	100	1.14	1.14	1.14
Dibenz(a,h)anthracene	2	100	1.08	1.08	1.08
1,2,3-Trichlorobenzene	2	0	1.00	1.00	1.00
1,2,4-Trichlorobenzene	2	0	1.00	1.00	1.00
2,4,5-Trichlorotoluene	2	0	1.00	1.00	1.00
Dehydroabietic Acid	6	17	1.00	1.00	1.00
Isopimaric Acid	4	0	1.00	1.00	1.00
Levopimaric Acid	4	0	1.00	1.00	1.00
Neoabietic Acid	4	0	1.00	1.00	1.00
Oleic Acid	4	0	1.00	1.00	1.00
Pentachlorobenzene	2	0	1.00	1.00	1.00
Pimaric Acid	4	0	1.00	1.00	1.00
Methylene chloride	2	0	.98	.98	.98
Total Kjeldahl nitrogen	2	50	.36	1.60	.98
Chloroform	2	0	.94	.94	.94
Toluene	2	0	.94	.94	.94
Aluminum	2	50	.67	1.20	.93
Total phosphorus	1	0	.90	.90	.90
Octachlorodibenzofuran	1	0	.73	.73	.73
Benzene	2	0	.72	.72	.72
Octachlorodibenzo-p-dioxin	1	0	.67	.67	.67
1,2-Dichloroethane	2	0	.60	.60	.60
o-Xylene	2	0	.52	.52	.52
Chloromethane	2	0	.51	.51	.51
Copper	2	0	.51	.51	.51
Styrene	2	0	.50	.50	.50
Zinc	2	0	.13	.44	.29
Nitrate+Nitrite	1	0	.23	.23	.23
Ammonia plus Ammonium	2	0	.10	.10	.10
Camphene	2	0	.10	.10	.10
Phenol	2	0	.10	.10	.10
m-Cresol	2	0	.10	.10	.10
p-Cresol	1	0	.10	.10	.10

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.8 CANADIAN PACIFIC FOREST PRODUCTS LTD., DRYDEN

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1)		
			MINIMUM	MAXIMUM	AVERAGE
Benzo(g,h,i)perylene	2	100	2.43	2.43	2.43
2,4,5-Trichlorotoluene	2	50	1.00	1.50	1.20
Bromodichloromethane	2	100	1.19	1.19	1.19
Benzo(k)fluoranthene	2	100	1.14	1.14	1.14
Dibenz(a,h)anthracene	2	100	1.08	1.08	1.08
1,2,3,4-Tetrachlorobenzene	2	0	1.00	1.00	1.00
1,2,3,5-Tetrachlorobenzene	2	0	1.00	1.00	1.00
1,2,3-Trichlorobenzene	2	0	1.00	1.00	1.00
1,2,4,5-Tetrachlorobenzene	2	0	1.00	1.00	1.00
1,2,4-Trichlorobenzene	2	0	1.00	1.00	1.00
Abietic Acid	2	0	1.00	1.00	1.00
Chlorodehydroabietic Acid	2	0	1.00	1.00	1.00
Dehydroabietic Acid	4	0	1.00	1.00	1.00
Dichlorodehydroabietic Ac.	2	0	1.00	1.00	1.00
Hexachlorobenzene	2	0	1.00	1.00	1.00
Hexachlorobutadiene	2	0	1.00	1.00	1.00
Hexachlorocyclopentadiene	2	0	1.00	1.00	1.00
Hexachloroethane	2	0	1.00	1.00	1.00
Isopimaric Acid	2	0	1.00	1.00	1.00
Levopimaric Acid	2	0	1.00	1.00	1.00
Neoabietic Acid	2	0	1.00	1.00	1.00
Octachlorostyrene	2	0	1.00	1.00	1.00
Oleic Acid	2	0	1.00	1.00	1.00
Pentachlorobenzene	2	0	1.00	1.00	1.00
Phenanthrene	2	0	1.00	1.00	1.00
Pimaric Acid	2	0	1.00	1.00	1.00
Methylene chloride	2	0	.98	.98	.98
Total PCDD	2	0	.95	.95	.95
Chloroform	2	0	.94	.94	.94
Toluene	2	0	.94	.94	.94
Aluminum	3	0	.67	1.00	.89
Total PCDF	2	0	.87	.87	.87
Copper	3	0	.51	1.00	.84
Nickel	3	0	.39	1.00	.80
Pyrene	2	0	.75	.75	.75
Total H6CDF	2	0	.75	.75	.75
Octachlorodibenzofuran	2	0	.73	.73	.73
Total H6CDD	2	0	.73	.73	.73
Benzene	2	0	.72	.72	.72
Molybdenum	3	0	.12	1.00	.71
Zinc	3	0	.13	1.00	.71
Vanadium	3	0	.10	1.00	.70
Chrysene	2	0	.67	.67	.67
Octachlorodibenzo-p-dioxin	2	0	.67	.67	.67
Total H7CDF	2	0	.67	.67	.67
Thallium	3	0	.50	.67	.61
1,2-Dichloroethane	2	0	.60	.60	.60
Sulphide	1	0	.60	.60	.60
Total H7CDD	2	0	.57	.57	.57
2,3,7,8 TCDD	2	0	.55	.55	.55
Total TCDD	2	0	.55	.55	.55
Total TCDF	2	0	.53	.53	.53
Fluoranthene	2	0	.50	.50	.50
Styrene	2	0	.50	.50	.50

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.8 (cont'd) CANADIAN PACIFIC FOREST PRODUCTS LTD., DRYDEN

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
2,3,5-Trichlorophenol	2	0	.31	.31	.31
2,4,6-Trichlorophenol	2	0	.31	.31	.31
Mercury	1	0	.20	.20	.20
Naphthalene	2	0	.19	.19	.19
2,4-Dichlorophenol	2	0	.18	.18	.18
Acenaphthylene	2	0	.14	.14	.14
Adsorbable Organic Halide	4	0	.12	.12	.12
Camphene	2	0	.10	.10	.10
Phenol	2	0	.10	.10	.10
m-Cresol	2	0	.10	.10	.10
o-Cresol	2	0	.10	.10	.10
p-Cresol	2	0	.10	.10	.10

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.9 CANADIAN PACIFIC FOREST PRODUCTS LTD., THUNDER BAY

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1)		
			MINIMUM	MAXIMUM	AVERAGE
Chlorodehydroabietic Acid	2	50	1.00	7.80	4.40
Benzo(g,h,i)perylene	2	100	2.43	2.43	2.43
Dehydroabietic Acid	6	67	1.00	4.00	2.20
Oleic Acid	2	50	1.00	3.20	2.00
Dichlorodehydroabietic Ac.	4	50	.00	2.20	1.40
Bromodichloromethane	2	100	1.19	1.19	1.19
Benzo(k)fluoranthene	2	100	1.14	1.14	1.14
Dibenz(a,h)anthracene	2	100	1.08	1.08	1.08
1,2,3,4-Tetrachlorobenzene	2	0	1.00	1.00	1.00
1,2,3,5-Tetrachlorobenzene	2	0	1.00	1.00	1.00
1,2,3-Trichlorobenzene	2	0	1.00	1.00	1.00
1,2,4,5-Tetrachlorobenzene	2	0	1.00	1.00	1.00
1,2,4-Trichlorobenzene	2	0	1.00	1.00	1.00
2,4,5-Trichlorotoluene	2	0	1.00	1.00	1.00
Abietic Acid	2	0	1.00	1.00	1.00
Hexachlorobenzene	2	0	1.00	1.00	1.00
Hexachlorobutadiene	2	0	1.00	1.00	1.00
Hexachlorocyclopentadiene	2	0	1.00	1.00	1.00
Hexachloroethane	2	0	1.00	1.00	1.00
Isopimaric Acid	2	0	1.00	1.00	1.00
Levopimaric Acid	2	0	1.00	1.00	1.00
Neoabietic Acid	2	0	1.00	1.00	1.00
Octachlorostyrene	2	0	1.00	1.00	1.00
Pentachlorobenzene	2	0	1.00	1.00	1.00
Phenanthrene	2	0	1.00	1.00	1.00
Pimaric Acid	2	0	1.00	1.00	1.00
Methylene chloride	2	0	.98	.98	.98
Total PCDD	2	0	.95	.95	.95
Chloroform	2	0	.94	.94	.94
Toluene	2	0	.94	.94	.94
Aluminum	2	50	.67	1.20	.93
Total PCDF	2	0	.87	.87	.87
Pyrene	2	0	.75	.75	.75
Total H6CDF	2	0	.75	.75	.75
Octachlorodibenzofuran	2	0	.73	.73	.73
Total H6CDD	2	0	.73	.73	.73
Benzene	2	0	.72	.72	.72
Chrysene	2	0	.67	.67	.67
Octachlorodibenzo-p-dioxin	2	0	.67	.67	.67
Total H7CDF	2	0	.67	.67	.67
1,2-Dichloroethane	2	0	.60	.60	.60
Sulphide	1	0	.60	.60	.60
Zinc	2	50	.13	1.04	.59
Total H7CDD	2	0	.57	.57	.57
2,3,7,8 TCDD	2	0	.55	.55	.55
Total TCDD	2	0	.55	.55	.55
Total TCDF	2	0	.53	.53	.53
Copper	2	0	.51	.51	.51
Fluoranthene	2	0	.50	.50	.50
Styrene	2	0	.50	.50	.50
Thallium	2	0	.50	.50	.50
Nickel	2	0	.39	.39	.39
2,3,5-Trichlorophenol	2	0	.31	.31	.31
2,4,6-Trichlorophenol	2	0	.31	.31	.31

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.9 (cont'd) CANADIAN PACIFIC FOREST PRODUCTS LTD., THUNDER BAY

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Mercury	1	0	.20	.20	.20
Naphthalene	2	0	.19	.19	.19
2,4-Dichlorophenol	2	0	.18	.18	.18
Acenaphthylene	2	0	.14	.14	.14
Adsorbable Organic Halide	3	0	.12	.12	.12
Molybdenum	2	0	.12	.12	.12
Camphene	2	0	.10	.10	.10
Chromium	2	0	.10	.10	.10
Phenol	2	0	.10	.10	.10
Vanadium	2	0	.10	.10	.10
m-Cresol	2	0	.10	.10	.10
o-Cresol	2	0	.10	.10	.10
p-Cresol	2	0	.10	.10	.10

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.10 DOMTAR INC., FINE PAPERS DIVISION (CORNWALL)

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1)		
			MINIMUM	MAXIMUM	AVERAGE
Pyrene	2	50	1.00	1.25	1.12
Aluminum	2	0	1.00	1.00	1.00
Chlorodehydroabietic Acid	2	0	1.00	1.00	1.00
Chromium	2	50	1.00	1.00	1.00
Chrysene	2	0	1.00	1.00	1.00
Copper	2	0	1.00	1.00	1.00
Dehydroabietic Acid	6	0	1.00	1.00	1.00
Dichlorodehydroabietic Ac.	6	0	1.00	1.00	1.00
Fluoranthene	2	0	1.00	1.00	1.00
Hexachlorocyclopentadiene	2	0	1.00	1.00	1.00
Isopimaric Acid	2	0	.80	1.00	1.00
Levopimaric Acid	2	0	1.00	1.00	1.00
Mercury	2	0	1.00	1.00	1.00
Molybdenum	2	0	1.00	1.00	1.00
Neoabietic Acid	2	0	1.00	1.00	1.00
Oleic Acid	2	50	1.00	1.20	1.00
Phenanthrene	2	0	1.00	1.00	1.00
Pimaric Acid	2	0	1.00	1.00	1.00
Thallium	2	0	1.00	1.00	1.00
Zinc	2	0	1.00	1.00	1.00
Naphthalene	2	50	.62	1.25	.94
Octachlorodibenzofuran	2	0	.93	.93	.93
Total H7CDF	2	0	.93	.93	.93
Octachlorodibenzo-p-dioxin	2	0	.87	.87	.87
Abietic Acid	2	0	.60	1.00	.80
Total PCDF	2	0	.80	.80	.80
2,3,5-Trichlorophenol	2	0	.77	.77	.77
2,4,6-Trichlorophenol	2	0	.77	.77	.77
Dibenz(a,h)anthracene	2	0	.77	.77	.77
Total H7CDD	2	0	.73	.73	.73
Acenaphthylene	2	0	.71	.71	.71
Benzo(g,h,i)perylene	2	0	.71	.71	.71
Benzo(k)fluoranthene	2	0	.71	.71	.71
Total H6CDD	2	0	.70	.70	.70
Vanadium	2	0	.67	.67	.67
2,3,7,8 TCDD	2	0	.60	.60	.60
Total H6CDF	2	0	.60	.60	.60
Total TCDD	2	0	.60	.60	.60
Total TCDF	2	0	.60	.60	.60
2,4-Dichlorophenol	2	0	.59	.59	.59
Methylene chloride	2	0	.38	.77	.58
Camphene	2	0	.57	.57	.57
1,2,3,4-Tetrachlorobenzene	2	0	.50	.50	.50
1,2,3,5-Tetrachlorobenzene	2	0	.50	.50	.50
1,2,3-Trichlorobenzene	2	0	.50	.50	.50
1,2,4,5-Tetrachlorobenzene	2	0	.50	.50	.50
1,2,4-Trichlorobenzene	2	0	.50	.50	.50
2,4,5-Trichlorotoluene	2	0	.50	.50	.50
Hexachlorobenzene	2	0	.50	.50	.50
Hexachlorobutadiene	2	0	.50	.50	.50
Hexachloroethane	2	0	.50	.50	.50
Nickel	2	0	.50	.50	.50
Octachlorostyrene	2	0	.50	.50	.50
Pentachlorobenzene	2	0	.50	.50	.50

DETECTION FREQUENCIES AND CONCENTRATION RATIOS
FOR CANDIDATE PARAMETERS IN PROCESS
EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.10 (cont'd) DOMTAR INC., FINE PAPERS DIVISION (CORNWALL)

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Phenol	2	0	.42	.42	.42
Adsorbable Organic Halide	6	0	.40	.40	.40
Styrene	2	0	.40	.40	.40
Toluene	2	0	.40	.40	.40
Total PCDD	2	0	.35	.35	.35
Chloroform	2	0	.29	.29	.29
m-Cresol	2	0	.29	.29	.29
p-Cresol	2	0	.29	.29	.29
o-Cresol	2	0	.27	.27	.27
1,2-Dichloroethane	2	0	.25	.25	.25
Bromodichloromethane	2	0	.25	.25	.25
Benzene	2	0	.20	.20	.20

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.11 DOMTAR INC., CONTAINERBOARD DIVISION (RED ROCK)

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
2,3,7,8 TCDD	1	0	1.00	1.00	1.00
Abietic Acid	2	0	1.00	1.00	1.00
Aluminum	2	0	1.00	1.00	1.00
Chlorodehydroabietic Acid	2	0	1.00	1.00	1.00
Chromium	2	0	1.00	1.00	1.00
Chrysene	2	0	1.00	1.00	1.00
Copper	2	0	1.00	1.00	1.00
Dehydroabietic Acid	5	0	1.00	1.00	1.00
Dichlorodehydroabietic Ac.	5	0	1.00	1.00	1.00
Fluoranthene	2	0	1.00	1.00	1.00
Hexachlorocyclopentadiene	2	0	1.00	1.00	1.00
Isopimaric Acid	2	0	1.00	1.00	1.00
Levopimaric Acid	2	0	1.00	1.00	1.00
Mercury	2	0	1.00	1.00	1.00
Molybdenum	2	0	1.00	1.00	1.00
Neoabietic Acid	2	0	1.00	1.00	1.00
Octachlorodibenzo-p-dioxin	1	0	1.00	1.00	1.00
Octachlorodibenzofuran	1	0	1.00	1.00	1.00
Oleic Acid	2	0	1.00	1.00	1.00
Phenanthrene	2	0	1.00	1.00	1.00
Pimaric Acid	2	0	1.00	1.00	1.00
Pyrene	2	0	1.00	1.00	1.00
Thallium	2	0	1.00	1.00	1.00
Total H6CDD	1	0	1.00	1.00	1.00
Total H6CDF	1	0	1.00	1.00	1.00
Total H7CDD	1	0	1.00	1.00	1.00
Total H7CDF	1	0	1.00	1.00	1.00
Total PCDD	1	0	1.00	1.00	1.00
Total PCDF	1	0	1.00	1.00	1.00
Total TCDD	1	0	1.00	1.00	1.00
Total TCDF	1	0	1.00	1.00	1.00
Zinc	2	0	1.00	1.00	1.00
2,3,5-Trichlorophenol	2	0	.77	.77	.77
2,4,6-Trichlorophenol	2	0	.77	.77	.77
Dibenz(a,h)anthracene	2	0	.77	.77	.77
Methylene chloride	2	0	.77	.77	.77
Acenaphthylene	2	0	.71	.71	.71
Benzo(g,h,i)perylene	2	0	.71	.71	.71
Benzo(k)fluoranthene	2	0	.71	.71	.71
Vanadium	2	0	.67	.67	.67
Naphthalene	2	0	.62	.62	.62
2,4-Dichlorophenol	2	0	.59	.59	.59
Camphene	2	0	.57	.57	.57
1,2,3,4-Tetrachlorobenzene	2	0	.50	.50	.50
1,2,3,5-Tetrachlorobenzene	2	0	.50	.50	.50
1,2,3-Trichlorobenzene	2	0	.50	.50	.50
1,2,4,5-Tetrachlorobenzene	2	0	.50	.60	.50
1,2,4-Trichlorobenzene	2	0	.50	.50	.50
2,4,5-Trichlorotoluene	2	0	.50	.50	.50
Hexachlorobenzene	2	0	.50	.50	.50
Hexachlorobutadiene	2	0	.50	.50	.50
Hexachloroethane	2	0	.50	.50	.50
Nickel	2	0	.50	.50	.50
Octachlorostyrene	2	0	.50	.50	.50

DETECTION FREQUENCIES AND CONCENTRATION RATIOS
FOR CANDIDATE PARAMETERS IN PROCESS
EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.11 (cont'd) DOMTAR INC., CONTAINERBOARD DIVISION (RED ROCK)

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Pentachlorobenzene	2	0	.50	.50	.50
Phenol	2	0	.42	.42	.42
Adsorbable Organic Halide	2	0	.40	.40	.40
Styrene	2	0	.40	.40	.40
Toluene	2	0	.40	.40	.40
Chloroform	2	0	.29	.29	.29
m-Cresol	2	0	.29	.29	.29
p-Cresol	2	0	.29	.29	.29
o-Cresol	2	0	.27	.27	.27
1,2-Dichloroethane	2	0	.25	.25	.25
Bromodichloromethane	2	0	.25	.25	.25
Benzene	2	0	.20	.20	.20

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.12 DOMTAR INC., FINE PAPERS DIVISION (ST. CATHARINES)

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
COD	1	100	24.00	24.00	24.00
BOD, 5 day, Total Demand	1	100	8.80	8.80	8.80
Dehydroabietic Acid	2	50	.60	4.80	2.80
Oleic Acid	2	50	.60	4.80	2.80
Zinc	2	50	1.00	2.70	1.85
Methylene chloride	2	50	.71	2.15	1.43
Pimaric Acid	2	50	.60	2.20	1.40
Octachlorodibenzo-p-dioxin	2	100	1.10	1.10	1.10
Total H6CDF	2	100	1.10	1.10	1.10
1,2-Dichloroethane	2	50	.64	1.02	.83
Chlorodehydroabietic Acid	2	0	.80	.80	.80
Isopimaric Acid	2	0	.80	.80	.80
Levopimaric Acid	2	0	.80	.80	.80
Chloroform	2	0	.79	.79	.79
Abietic Acid	2	0	.60	.60	.60
Neoabietic Acid	2	0	.60	.60	.60
Bromodichloromethane	2	0	.49	.49	.49
Toluene	2	0	.48	.48	.48
Trichloroethylene	2	0	.48	.48	.48
Copper	2	0	.30	.60	.45
Aluminum	2	0	.32	.53	.43
1,2,4-Trichlorobenzene	2	0	.20	.50	.40
Hexachlorocyclopentadiene	2	0	.40	.40	.40
Benzene	2	0	.38	.38	.38
o-Xylene	2	0	.38	.38	.38
1,2,3-Trichlorobenzene	2	0	.30	.30	.30
Chromium	2	0	.10	.45	.28
1,1-Dichloroethane	2	0	.25	.25	.25
Dibromochloromethane	2	0	.22	.22	.22
Tetrachloroethylene	2	0	.19	.19	.19
m-Xylene and p-Xylene	2	0	.19	.19	.19
Phenol	2	0	.16	.16	.16
Pentachlorophenol	2	0	.14	.14	.14
m-Cresol	2	0	.13	.13	.13
p-Cresol	2	0	.13	.13	.13
1,1-Dichloroethylene	2	0	.11	.11	.11
Naphthalene	2	0	.11	.11	.11
1,2,3,4-Tetrachlorobenzene	2	0	.10	.10	.10
2-Methylnaphthalene	2	0	.10	.10	.10

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.13 DOMTAR INC., CONTAINERBOARD DIVISION (TRENTON)

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Oleic Acid	2	50	1.00	5.20	3.00
Abietic Acid	2	0	1.00	1.00	1.00
Aluminum	2	0	1.00	1.00	1.00
Cadmium	2	0	1.00	1.00	1.00
Chlorodehydroabietic Acid	2	0	1.00	1.00	1.00
Chromium	2	50	1.00	1.00	1.00
Cobalt	2	0	1.00	1.00	1.00
Copper	2	0	1.00	1.00	1.00
Dehydroabietic Acid	6	0	1.00	1.00	1.00
Isopimaric Acid	2	0	1.00	1.00	1.00
Lead	2	0	1.00	1.00	1.00
Levopimaric Acid	2	0	1.00	1.00	1.00
Molybdenum	2	0	1.00	1.00	1.00
Neoabietic Acid	2	0	1.00	1.00	1.00
Pimaric Acid	2	0	1.00	1.00	1.00
Thallium	2	0	1.00	1.00	1.00
Zinc	2	0	1.00	1.00	1.00
Vanadium	2	0	.67	.67	.67
Nickel	2	0	.50	.50	.50
Phenol	2	0	.42	.42	.42
Chloroform	2	0	.29	.29	.29
o-Cresol	2	0	.27	.27	.27

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.14 E.B. EDDY FOREST PRODUCTS LTD., ESPANOLA

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Dehydroabietic Acid	10	20	.00	11.00	1.80
Benzene	5	40	.38	4.00	1.51
Benzo(g,h,i)perylene	3	0	.99	.99	.99
Dibenz(a,h)anthracene	3	0	.98	.98	.98
Methylene chloride	5	40	.71	1.69	.98
Total PCDD	3	0	.95	.95	.95
Chrysene	4	0	.90	.90	.90
Total PCDF	3	0	.87	.87	.87
Benzo(k)fluoranthene	4	0	.83	.83	.83
Chlorodehydroabietic Acid	2	0	.80	.80	.80
Dichlorodehydroabietic Ac.	7	0	.80	.80	.80
Isopimaric Acid	2	0	.80	.80	.80
Levopimaric Acid	2	0	.80	.80	.80
Chloroform	5	0	.79	.79	.79
Thallium	4	0	.37	.90	.77
Total H6CDF	3	0	.75	.75	.75
Octachlorodibenzofuran	3	0	.73	.73	.73
Total H6CDD	3	0	.73	.73	.73
1,2-Dichloroethane	5	20	.64	1.02	.71
Octachlorodibenzo-p-dioxin	3	0	.67	.67	.67
Total H7CDF	3	0	.67	.67	.67
Pyrene	4	0	.65	.65	.65
2,4-Dichlorophenol	4	0	.63	.63	.63
Abietic Acid	2	0	.60	.60	.60
Neoabietic Acid	2	0	.60	.60	.60
Oleic Acid	2	0	.60	.60	.60
Pimaric Acid	2	0	.60	.60	.60
Total H7CDD	3	0	.57	.57	.57
Mercury	4	0	.56	.56	.56
2,3,7,8 TCDD	3	0	.55	.55	.55
Total TCDD	3	0	.55	.55	.55
Total TCDF	3	0	.53	.53	.53
Zinc	3	0	.30	1.00	.53
Phenanthrene	4	0	.50	.50	.50
Bromodichloromethane	5	0	.49	.49	.49
Toluene	5	0	.48	.54	.49
Styrene	5	0	.48	.48	.48
Hexachlorobenzene	5	0	.40	.40	.40
Hexachlorocyclopentadiene	5	0	.40	.40	.40
Aluminum	3	0	.32	.53	.39
Copper	4	0	.30	.60	.38
Fluoranthene	4	0	.32	.32	.32
1,2,3-Trichlorobenzene	5	0	.30	.30	.30
Molybdenum	4	0	.25	.25	.25
1,2,3,5-Tetrachlorobenzene	5	0	.20	.20	.20
1,2,4-Trichlorobenzene	5	0	.20	.30	.20
Hexachlorobutadiene	5	0	.20	.20	.20
Hexachloroethane	5	0	.20	.20	.20
Nickel	4	0	.17	.30	.20
Chromium	4	0	.10	.45	.19
Phenol	4	0	.16	.16	.16
o-Cresol	4	0	.15	.15	.15
Adsorbable Organic Halide	8	0	.10	.30	.14
Vanadium	4	0	.13	.17	.14

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.14 (cont'd) E.B. EDDY FOREST PRODUCTS LTD., ESPANOLA

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
m-Cresol	4	0	.13	.13	.13
p-Cresol	4	0	.13	.13	.13
Acenaphthylene	4	0	.11	.11	.11
Naphthalene	4	0	.11	.11	.11
1,2,3,4-Tetrachlorobenzene	5	0	.10	.10	.10
1,2,4,5-Tetrachlorobenzene	5	0	.10	.10	.10
2,3,5-Trichlorophenol	4	0	.10	.10	.10
2,4,5-Trichlorotoluene	5	0	.10	.10	.10
2,4,6-Trichlorophenol	4	0	.10	.10	.10
Camphene	4	0	.10	.10	.10
Octachlorostyrene	5	0	.10	.10	.10
Pentachlorobenzene	5	0	.10	.10	.10

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.15 E.B. EDDY FOREST PRODUCTS LTD., OTTAWA

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
1,2-Dichloroethane	2	50	.64	1.02	.83
Chlorodehydroabietic Acid	2	0	.80	.80	.80
Isopimaric Acid	2	0	.80	.80	.80
Levopimaric Acid	2	0	.80	.80	.80
Chloroform	2	0	.79	.79	.79
Benzene	2	50	.38	1.12	.75
Total H6CDF	2	0	.75	.75	.75
Methylene chloride	2	0	.71	.71	.71
Octachlorodibenzo-p-dioxin	2	0	.67	.67	.67
Zinc	2	0	.30	1.00	.65
Abietic Acid	2	0	.60	.60	.60
Dehydroabietic Acid	2	0	.60	.60	.60
Neoabietic Acid	2	0	.60	.60	.60
Oleic Acid	2	0	.60	.60	.60
Pimaric Acid	2	0	.60	.60	.60
Bromodichloromethane	2	0	.49	.49	.49
Toluene	2	0	.48	.48	.48
Trichloroethylene	2	0	.48	.48	.48
Copper	2	0	.30	.60	.45
Aluminum	2	0	.32	.53	.43
Hexachlorocyclopentadiene	2	0	.40	.40	.40
o-Xylene	2	0	.38	.38	.38
1,2,3-Trichlorobenzene	2	0	.30	.30	.30
Chromium	2	0	.10	.45	.28
1,1-Dichloroethane	2	0	.25	.25	.25
Dibromochloromethane	2	0	.22	.22	.22
1,2,4-Trichlorobenzene	2	0	.20	.20	.20
Tetrachloroethylene	2	0	.19	.19	.19
m-Xylene and p-Xylene	2	0	.19	.19	.19
Phenol	2	0	.16	.16	.16
Pentachlorophenol	2	0	.14	.14	.14
m-Cresol	2	0	.13	.13	.13
p-Cresol	2	0	.13	.13	.13
1,1-Dichloroethylene	2	0	.11	.11	.11
Naphthalene	2	0	.11	.11	.11
1,2,3,4-Tetrachlorobenzene	2	0	.10	.10	.10
2-Methylnaphthalene	2	0	.10	.10	.10

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.16 JAMES RIVER-MARATHON LTD.

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Adsorbable Organic Halide	1	100	29.60	29.60	29.60
Toluene	2	50	.80	12.00	6.40
Octachlorodibenzo-p-dioxin	2	100	4.67	5.33	5.00
Oleic Acid	1	100	3.00	3.00	3.00
Aluminum	1	0	1.00	1.00	1.00
Benzo(g,h,i)perylene	2	0	1.00	1.00	1.00
Benzo(k)fluoranthene	2	0	1.00	1.00	1.00
Chromium	1	0	1.00	1.00	1.00
Chrysene	2	0	1.00	1.00	1.00
Copper	2	0	1.00	1.00	1.00
Fluoranthene	2	0	1.00	1.00	1.00
Mercury	1	100	1.00	1.00	1.00
Molybdenum	2	0	1.00	1.00	1.00
Nickel	1	0	1.00	1.00	1.00
Phenanthrene	2	0	1.00	1.00	1.00
Pyrene	2	0	1.00	1.00	1.00
Thallium	2	0	1.00	1.00	1.00
Vanadium	2	0	1.00	1.00	1.00
Zinc	2	50	1.00	1.00	1.00
1,2,3,4-Tetrachlorobenzene	2	0	.90	.90	.90
m-Cresol	2	0	.88	.88	.88
1,2,3-Trichlorobenzene	2	0	.80	.80	.80
Chlorodehydroabietic Acid	2	0	.80	.80	.80
Styrene	2	0	.80	.80	.80
1,2,4-Trichlorobenzene	2	0	.60	.60	.60
Dichlorodehydroabietic Ac.	6	0	.20	.60	.60
Levopimaric Acid	2	0	.60	.60	.60
Neoabietic Acid	2	0	.60	.60	.60
Total TCDF	2	0	.53	.67	.60
Octachlorodibenzofuran	2	0	.40	.63	.53
Total H7CDD	2	0	.33	.70	.53
Bromodichloromethane	2	0	.50	.52	.51
Chloroform	2	0	.51	.51	.51
1,2,3,5-Tetrachlorobenzene	2	0	.50	.50	.50
1,2,4,5-Tetrachlorobenzene	2	0	.50	.50	.50
1,2-Dichloroethane	2	0	.49	.49	.49
Total PCDF	2	0	.13	.73	.47
Abietic Acid	2	0	.40	.40	.40
Benzene	2	0	.40	.40	.40
Dehydroabietic Acid	6	17	.20	1.00	.40
Hexachlorocyclopentadiene	2	0	.40	.40	.40
Total H7CDF	2	0	.33	.50	.40
Naphthalene	2	0	.37	.37	.37
Total H6CDF	2	0	.15	.50	.35
Total PCDD	2	0	.15	.50	.35
2,3,5-Trichlorophenol	2	0	.31	.31	.31
2,3,7,8 TCDD	2	0	.10	.50	.30
Hexachlorobenzene	2	0	.30	.30	.30
Total TCDD	2	0	.10	.50	.30
Acenaphthylene	2	0	.29	.29	.29
Methylene chloride	2	0	.25	.25	.25
Dibenz(a,h)anthracene	2	0	.23	.23	.23
Total H6CDD	2	0	.10	.33	.23
2,4,5-Trichlorotoluene	2	0	.20	.20	.20

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.16 (cont'd) JAMES RIVER-MARATHON LTD.

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Hexachlorobutadiene	2	0	.20	.20	.20
Isopimaric Acid	2	0	.20	.20	.20
Octachlorostyrene	2	0	.20	.20	.20
Pentachlorobenzene	2	0	.20	.20	.20
Pimaric Acid	2	0	.20	.20	.20
o-Cresol	2	0	.19	.19	.19
2,4,6-Trichlorophenol	2	0	.15	.15	.15
Camphene	2	0	.14	.14	.14
p-Cresol	2	0	.14	.14	.14
2,4-Dichlorophenol	2	0	.12	.12	.12
Hexachloroethane	2	0	.10	.10	.10
Phenol	2	0	.10	.10	.10

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.17 KIMBERLY-CLARK CANADA INC., HUNTSVILLE

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Octachlorodibenzo-p-dioxin	1	100	1.87	1.87	1.87
Methylene chloride	3	33	.77	2.23	1.26
Abietic Acid	3	0	1.00	1.00	1.00
Aluminum	3	33	1.00	1.00	1.00
Chlorodehydroabietic Acid	3	0	1.00	1.00	1.00
Chromium	3	33	1.00	1.00	1.00
Copper	3	0	1.00	1.00	1.00
Dehydroabietic Acid	3	0	1.00	1.00	1.00
Hexachlorocyclopentadiene	3	0	1.00	1.00	1.00
Isopimaric Acid	3	0	1.00	1.00	1.00
Levopimaric Acid	3	0	1.00	1.00	1.00
Neoabietic Acid	3	0	1.00	1.00	1.00
Oleic Acid	3	0	1.00	1.00	1.00
Pimaric Acid	3	0	1.00	1.00	1.00
Total H6CDF	1	0	1.00	1.00	1.00
Zinc	3	0	1.00	1.00	1.00
2-Methylnaphthalene	3	0	.91	.91	.91
Dibromochloromethane	3	0	.91	.91	.91
Pentachlorophenol	3	0	.77	.77	.77
Naphthalene	3	0	.62	.62	.62
1,2,3,4-Tetrachlorobenzene	3	0	.50	.50	.50
1,2,3-Trichlorobenzene	3	0	.50	.50	.50
1,2,4-Trichlorobenzene	3	0	.50	.50	.50
Tetrachloroethylene	3	0	.45	.45	.45
Phenol	3	0	.42	.42	.42
Toluene	3	0	.40	.40	.40
o-Xylene	3	0	.40	.40	.40
Chloroform	3	0	.29	.29	.29
m-Cresol	3	0	.29	.29	.29
p-Cresol	3	0	.29	.29	.29
1,1-Dichloroethane	3	0	.25	.25	.25
1,2-Dichloroethane	3	0	.25	.25	.25
Bromodichloromethane	3	0	.25	.25	.25
Benzene	3	0	.20	.20	.20
1,1-Dichloroethylene	3	0	.18	.18	.18
m-Xylene and p-Xylene	3	0	.18	.18	.18
Trichloroethylene	3	0	.11	.21	.14

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.18 KIMBERLY-CLARK CANADA INC., ST. CATHARINES

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Oleic Acid	2	50	.80	4.20	2.60
Hexachlorocyclopentadiene	3	0	1.00	1.00	1.00
Copper	3	33	.10	1.90	.81
Aluminum	2	50	.10	1.47	.78
1,2,3,4-Tetrachlorobenzene	3	0	.20	1.00	.70
1,2,3-Trichlorobenzene	3	0	.20	1.00	.70
1,2,4-Trichlorobenzene	3	0	.20	1.00	.70
Bromodichloromethane	3	0	.10	1.00	.70
Abietic Acid	3	0	.00	.80	.60
Chlorodehydroabietic Acid	3	0	.00	.80	.60
Dehydroabietic Acid	3	0	.20	.80	.60
Isopimaric Acid	3	0	.40	.80	.60
Levopimaric Acid	3	0	.00	.80	.60
Neoabietic Acid	3	0	.00	.80	.60
Pimaric Acid	3	0	.00	.80	.60
Total H6CDF	2	0	.50	.50	.50
Zinc	2	0	.10	.90	.50
2-Methylnaphthalene	3	0	.10	.36	.28
Methylene chloride	3	0	.15	.46	.26
Pentachlorophenol	3	0	.10	.31	.24
Phenol	3	0	.10	.42	.24
m-Cresol	3	0	.10	.24	.19
p-Cresol	3	0	.10	.23	.19
Benzene	3	0	.16	.16	.16
Chromium	3	0	.10	.21	.14
Tetrachloroethylene	3	0	.14	.14	.14
Toluene	3	0	.12	.12	.12
Chloroform	3	0	.10	.11	.11
Dibromochloromethane	3	0	.11	.11	.11
1,1-Dichloroethane	3	0	.10	.10	.10
1,1-Dichloroethylene	3	0	.10	.10	.10
1,2-Dichloroethane	3	0	.10	.10	.10
Naphthalene	3	0	.10	.10	.10
Trichloroethylene	3	0	.10	.10	.10
m-Xylene and p-Xylene	3	0	.10	.10	.10
o-Xylene	3	0	.10	.10	.10

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.19 KIMBERLY-CLARK CANADA INC., TERRACE BAY

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1)		
			MINIMUM	MAXIMUM	AVERAGE
Total PCDD	2	50	1.00	3.00	2.00
Octachlorodibenzo-p-dioxin	2	100	1.07	2.67	1.87
2,3,7,8 TCDD	2	50	1.00	2.00	1.50
Octachlorodibenzofuran	2	50	1.00	2.00	1.50
Total H6CDD	2	50	1.00	2.00	1.50
Total TCDD	2	50	1.00	2.00	1.50
Total PCDF	2	50	1.00	1.33	1.20
Total TCDF	2	50	1.00	1.33	1.20
Total H7CDF	2	50	1.00	1.33	1.17
Abietic Acid	2	0	1.00	1.00	1.00
Aluminum	2	0	1.00	1.00	1.00
Chlorodehydroabietic Acid	2	0	1.00	1.00	1.00
Chromium	2	50	1.00	1.00	1.00
Chrysene	2	0	1.00	1.00	1.00
Copper	2	0	1.00	1.00	1.00
Dehydroabietic Acid	6	0	1.00	1.00	1.00
Dichlorodehydroabietic Ac.	6	0	1.00	1.00	1.00
Fluoranthene	2	0	1.00	1.00	1.00
Hexachlorocyclopentadiene	2	0	1.00	1.00	1.00
Isopimaric Acid	2	0	1.00	1.00	1.00
Levopimaric Acid	2	0	1.00	1.00	1.00
Mercury	2	0	1.00	1.00	1.00
Molybdenum	2	0	1.00	1.00	1.00
Neoabietic Acid	2	0	1.00	1.00	1.00
Oleic Acid	2	0	1.00	1.00	1.00
Phenanthrene	2	0	1.00	1.00	1.00
Pimaric Acid	2	0	1.00	1.00	1.00
Pyrene	2	0	1.00	1.00	1.00
Thallium	2	0	1.00	1.00	1.00
Total H6CDF	2	0	1.00	1.00	1.00
Zinc	2	0	1.00	1.00	1.00
Total H7CDD	2	0	.67	1.00	.83
2,3,5-Trichlorophenol	2	0	.77	.77	.77
2,4,6-Trichlorophenol	2	0	.77	.77	.77
Dibenz(a,h)anthracene	2	0	.77	.77	.77
Methylene chloride	2	0	.77	.77	.77
Acenaphthylene	2	0	.71	.71	.71
Benzo(g,h,i)perylene	2	0	.71	.71	.71
Benzo(k)fluoranthene	2	0	.71	.71	.71
Vanadium	2	0	.67	.67	.67
Naphthalene	2	0	.62	.62	.62
2,4-Dichlorophenol	2	0	.59	.59	.59
Camphene	2	0	.57	.57	.57
1,2,3,4-Tetrachlorobenzene	2	0	.50	.50	.50
1,2,3,5-Tetrachlorobenzene	2	0	.50	.50	.50
1,2,3-Trichlorobenzene	2	0	.50	.50	.50
1,2,4,5-Tetrachlorobenzene	2	0	.50	.50	.50
1,2,4-Trichlorobenzene	2	0	.50	.50	.50
2,4,5-Trichlorotoluene	2	0	.50	.50	.50
Hexachlorobenzene	2	0	.50	.50	.50
Hexachlorobutadiene	2	0	.50	.50	.50
Hexachloroethane	2	0	.50	.50	.50
Nickel	2	0	.50	.50	.50
Octachlorostyrene	2	0	.50	.50	.50

DETECTION FREQUENCIES AND CONCENTRATION RATIOS
FOR CANDIDATE PARAMETERS IN PROCESS
EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.19 (cont'd) KIMBERLY-CLARK CANADA INC., TERRACE BAY

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Pentachlorobenzene	2	0	.50	.50	.50
Phenol	2	0	.42	.42	.42
Adsorbable Organic Halide	3	0	.40	.40	.40
Styrene	2	0	.40	.40	.40
Toluene	2	0	.40	.40	.40
Chloroform	2	0	.29	.29	.29
m-Cresol	2	0	.29	.29	.29
p-Cresol	2	0	.29	.29	.29
o-Cresol	2	0	.27	.27	.27
1,2-Dichloroethane	2	0	.25	.25	.25
Bromodichloromethane	2	0	.25	.25	.25
Benzene	2	0	.20	.20	.20

NOTE: (1) Concentration Ratio = concentration divided by
Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.20a MACMILLAN BLOEDEL LTD.
Control Point 0100

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Dehydroabietic Acid	3	33	1.00	27.00	9.60
Total Kjeldahl nitrogen	2	50	1.00	13.24	7.12
Copper	2	50	1.00	11.00	6.00
Aluminum	1	100	5.67	5.67	5.67
Cadmium	2	100	5.00	5.00	5.00
Vanadium	2	50	.67	4.33	2.50
Ammonia plus Ammonium	2	50	.80	2.14	1.47
Abietic Acid	2	0	1.00	1.00	1.00
Chlorodehydroabietic Acid	2	0	1.00	1.00	1.00
Levopimaric Acid	1	0	1.00	1.00	1.00
Neoabietic Acid	1	0	1.00	1.00	1.00
Oleic Acid	1	0	1.00	1.00	1.00
Pimaric Acid	1	0	1.00	1.00	1.00
Zinc	1	100	1.00	1.00	1.00
Chromium	2	50	.50	1.30	.90
Lead	2	50	.33	1.00	.67
Thallium	2	0	.67	.67	.67
o-Cresol	2	0	.65	.65	.65
Isopimaric Acid	2	0	.00	1.00	.60
Chloroform	2	0	.57	.57	.57
Cobalt	2	0	.50	.50	.50
Molybdenum	2	0	.50	.50	.50
Nickel	2	0	.50	.50	.50
Total phosphorus	2	0	.50	.50	.50
Phenol	2	0	.42	.42	.42
Nitrate+Nitrite	2	0	.40	.40	.40

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.20b MACMILLAN BLOEDEL LTD.
Control Point 0100

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Zinc	2	100	1.00	44.10	22.55
Copper	3	67	1.00	11.00	6.40
Aluminum	2	100	5.00	5.67	5.33
Total Kjeldahl nitrogen	3	33	1.00	13.24	5.08
Cadmium	3	67	.60	5.00	3.53
Vanadium	3	33	.67	4.33	1.89
Chromium	3	67	.50	2.35	1.38
Ammonia plus Ammonium	3	33	.56	2.14	1.18
Abietic Acid	3	0	1.00	1.00	1.00
Chlorodehydroabietic Acid	3	0	1.00	1.00	1.00
Dehydroabietic Acid	9	0	1.00	1.00	1.00
Isopimaric Acid	3	0	1.00	1.00	1.00
Levopimaric Acid	3	0	1.00	1.00	1.00
Neoabietic Acid	3	0	1.00	1.00	1.00
Oleic Acid	3	0	1.00	1.00	1.00
Pimaric Acid	3	0	1.00	1.00	1.00
Thallium	3	33	.67	1.33	.89
o-Cresol	3	0	.65	.65	.65
Chloroform	3	0	.57	.57	.57
Lead	3	33	.33	1.00	.56
Cobalt	3	0	.50	.50	.50
Molybdenum	3	0	.50	.50	.50
Nickel	3	0	.50	.50	.50
Total phosphorus	3	0	.50	.50	.50
Phenol	3	0	.42	.42	.42
Nitrate+Nitrite	3	0	.12	.40	.31

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.21 MALETTE KRAFT PULP AND POWER

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Methylene chloride	2	100	1.54	5.85	3.69
Chlorodehydroabietic Acid	2	50	.80	2.60	1.60
Dehydroabietic Acid	5	20	.60	2.80	1.00
Benzo(g,h,i)perylene	1	0	.99	.99	.99
Dibenz(a,h)anthracene	1	0	.98	.98	.98
Total PCDD	2	0	.95	.95	.95
Total PCDF	2	0	.87	1.00	.93
Chrysene	2	0	.90	.90	.90
Total H6CDF	2	0	.75	1.00	.90
Benzo(k)fluoranthene	2	0	.83	.83	.83
Dichlorodehydroabietic Ac.	5	0	.80	.80	.80
Isopimaric Acid	2	0	.80	.80	.80
Levopimaric Acid	2	0	.80	.80	.80
Chloroform	2	0	.79	.79	.79
Toluene	2	50	.48	1.10	.79
Benzene	2	50	.38	1.14	.76
Total H6CDD	2	0	.73	.73	.73
Total H7CDF	2	0	.67	.73	.70
Octachlorodibenzo-p-dioxin	2	0	.67	.67	.67
Total TCDF	2	0	.53	.87	.67
Pyrene	2	0	.65	.65	.65
1,2-Dichloroethane	2	0	.64	.64	.64
2,4-Dichlorophenol	2	0	.63	.63	.63
Thallium	2	0	.37	.90	.63
Abietic Acid	2	0	.60	.60	.60
Neoabietic Acid	2	0	.60	.60	.60
Oleic Acid	2	0	.60	.60	.60
Pimaric Acid	2	0	.60	.60	.60
Octachlorodibenzofuran	2	0	.37	.73	.57
Total H7CDD	2	0	.57	.57	.57
Mercury	2	0	.56	.56	.56
Total TCDD	2	0	.55	.55	.55
2,3,7,8 TCDD	2	0	.40	.55	.50
Phenanthrene	2	0	.50	.50	.50
Bromodichloromethane	2	0	.49	.49	.49
Styrene	2	0	.48	.48	.48
Hexachlorobenzene	2	0	.40	.40	.40
Hexachlorocyclopentadiene	2	0	.40	.40	.40
Aluminum	2	0	.32	.32	.32
Fluoranthene	2	0	.32	.32	.32
1,2,3-Trichlorobenzene	2	0	.30	.30	.30
Copper	2	0	.30	.30	.30
Zinc	2	0	.30	.30	.30
Molybdenum	2	0	.25	.25	.25
1,2,3,5-Tetrachlorobenzene	2	0	.20	.20	.20
1,2,4-Trichlorobenzene	2	0	.20	.20	.20
Hexachlorobutadiene	2	0	.20	.20	.20
Hexachloroethane	2	0	.20	.20	.20
Nickel	2	0	.17	.20	.18
Phenol	2	0	.16	.16	.16
o-Cresol	2	0	.15	.15	.15
Vanadium	2	0	.13	.13	.13
m-Cresol	2	0	.13	.13	.13
p-Cresol	2	0	.13	.13	.13

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.21 (cont'd) MALETTE KRAFT PULP AND POWER

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Acenaphthylene	2	0	.11	.11	.11
Naphthalene	2	0	.11	.11	.11
1,2,3,4-Tetrachlorobenzene	2	0	.10	.10	.10
1,2,4,5-Tetrachlorobenzene	2	0	.10	.10	.10
2,3,5-Trichlorophenol	2	0	.10	.10	.10
2,4,5-Trichlorotoluene	2	0	.10	.10	.10
2,4,6-Trichlorophenol	2	0	.10	.10	.10
Camphene	2	0	.10	.10	.10
Chromium	2	0	.10	.10	.10
Octachlorostyrene	2	0	.10	.10	.10
Pentachlorobenzene	2	0	.10	.10	.10

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.22 NORANDA FOREST INC., RECYCLED PAPERS

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1)		
			MINIMUM	MAXIMUM	AVERAGE
Levopimaric Acid	2	50	.80	15.20	8.00
Dehydroabietic Acid	2	50	.60	5.40	3.00
Benzene	2	50	.38	5.60	2.99
Pimaric Acid	2	50	.60	4.40	2.40
Methylene chloride	2	100	1.05	1.54	1.29
1,2-Dichloroethane	2	50	.64	1.02	.83
Chlorodehydroabietic Acid	2	0	.80	.80	.80
Isopimaric Acid	2	0	.80	.80	.80
Chloroform	2	0	.79	.79	.79
Total H6CDF	2	0	.75	.75	.75
Zinc	2	0	.50	1.00	.75
1,2,4-Trichlorobenzene	2	50	.20	1.10	.70
Octachlorodibenzo-p-dioxin	2	0	.67	.67	.67
Abietic Acid	2	0	.60	.60	.60
Neoabietic Acid	2	0	.60	.60	.60
Oleic Acid	2	0	.60	.60	.60
Toluene	2	0	.48	.66	.57
Bromodichloromethane	2	0	.49	.49	.49
Trichloroethylene	2	0	.48	.48	.48
Copper	2	0	.30	.60	.45
Aluminum	2	0	.32	.53	.43
Hexachlorocyclopentadiene	2	0	.40	.40	.40
o-Xylene	2	0	.38	.38	.38
1,2,3-Trichlorobenzene	2	0	.30	.30	.30
Chromium	2	0	.10	.45	.28
1,1-Dichloroethane	2	0	.25	.25	.25
Dibromochloromethane	2	0	.22	.22	.22
Tetrachloroethylene	2	0	.19	.19	.19
m-Xylene and p-Xylene	2	0	.19	.19	.19
Phenol	2	0	.16	.16	.16
Pentachlorophenol	2	0	.14	.14	.14
m-Cresol	2	0	.13	.13	.13
p-Cresol	2	0	.13	.13	.13
1,1-Dichloroethylene	2	0	.11	.11	.11
Naphthalene	2	0	.11	.11	.11
1,2,3,4-Tetrachlorobenzene	2	0	.10	.10	.10
2-Methylnaphthalene	2	0	.10	.10	.10

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.23 QUEBEC AND ONTARIO PAPER COMPANY LTD.

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
1,2-Dichloroethane	1	100	1.02	1.02	1.02
Chlorodehydroabietic Acid	2	0	.80	.80	.80
Isopimaric Acid	2	0	.80	.80	.80
Levopimaric Acid	2	0	.80	.80	.80
Chloroform	1	0	.79	.79	.79
Methylene chloride	1	0	.71	.71	.71
Abietic Acid	2	0	.60	.60	.60
Dehydroabietic Acid	5	0	.60	.60	.60
Neoabietic Acid	2	0	.60	.60	.60
Oleic Acid	2	0	.60	.60	.60
Pimaric Acid	2	0	.60	.60	.60
Bromodichloromethane	1	0	.49	.49	.49
Styrene	1	0	.48	.48	.48
Toluene	1	0	.48	.48	.48
Benzene	1	0	.38	.38	.38
o-Xylene	1	0	.38	.38	.38
Aluminum	2	0	.32	.40	.36
Copper	2	0	.30	.30	.30
Zinc	2	0	.30	.30	.30
Chloromethane	1	0	.25	.25	.25
Phenol	1	0	.16	.16	.16
m-Cresol	1	0	.13	.13	.13
p-Cresol	1	0	.13	.13	.13

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.24 ST. MARYS PAPER INC.

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Dehydroabietic Acid	5	40	.60	16.40	4.60
Isopimaric Acid	2	50	.80	1.80	1.40
Methylene chloride	2	50	.71	2.00	1.35
Benzo(g,h,i)perylene	1	0	.99	.99	.99
Dibenz(a,h)anthracene	1	0	.98	.98	.98
1,2-Dichloroethane	2	50	.64	1.02	.83
Benzo(k)fluoranthene	2	0	.83	.83	.83
Chlorodehydroabietic Acid	2	0	.80	.80	.80
Levopimaric Acid	2	0	.80	.80	.80
Chloroform	2	0	.79	.79	.79
Octachlorodibenzofuran	2	0	.73	.73	.73
Octachlorodibenzo-p-dioxin	2	0	.67	.67	.67
Abietic Acid	2	0	.60	.60	.60
Neoabietic Acid	2	0	.60	.60	.60
Oleic Acid	2	0	.60	.60	.60
Pimaric Acid	2	0	.60	.60	.60
Bromodichloromethane	2	0	.49	.49	.49
Styrene	2	0	.48	.48	.48
Toluene	2	0	.48	.48	.48
Benzene	2	0	.38	.52	.45
o-Xylene	2	0	.38	.38	.38
Aluminum	1	0	.32	.32	.32
1,2,3-Trichlorobenzene	2	0	.30	.30	.30
Copper	1	0	.30	.30	.30
Zinc	1	0	.30	.30	.30
1,2,4-Trichlorobenzene	2	0	.20	.20	.20
Chloromethane	2	0	.18	.18	.18
Phenol	2	0	.16	.16	.16
m-Cresol	2	0	.13	.13	.13
p-Cresol	2	0	.13	.13	.13
2,4,5-Trichlorotoluene	2	0	.10	.10	.10
Camphene	2	0	.10	.10	.10
Pentachlorobenzene	2	0	.10	.10	.10

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.25 SPRUCE FALLS POWER AND PAPER COMPANY LTD.

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Zinc	1	100	6.00	6.00	6.00
Copper	1	100	2.00	2.00	2.00
Octachlorodibenzo-p-dioxin	1	100	1.67	1.67	1.67
Dehydroabietic Acid	6	33	1.00	4.00	1.60
Oleic Acid	3	33	1.00	2.00	1.40
Abietic Acid	3	33	1.00	1.40	1.20
Aluminum	1	0	1.00	1.00	1.00
Chlorodehydroabietic Acid	3	0	1.00	1.00	1.00
Isopimaric Acid	3	0	1.00	1.00	1.00
Levopimaric Acid	2	0	1.00	1.00	1.00
Neoabietic Acid	3	0	1.00	1.00	1.00
Octachlorodibenzofuran	1	0	1.00	1.00	1.00
Pimaric Acid	3	0	1.00	1.00	1.00
Dibenz(a,h)anthracene	3	0	.77	.77	.77
Methylene chloride	2	0	.77	.77	.77
Benzo(g,h,i)perylene	3	0	.71	.71	.71
Benzo(k)fluoranthene	3	0	.71	.71	.71
Camphene	3	0	.57	.57	.57
Chloromethane	2	0	.54	.54	.54
1,2,3-Trichlorobenzene	2	0	.50	.50	.50
1,2,4-Trichlorobenzene	2	0	.50	.50	.50
2,4,5-Trichlorotoluene	2	0	.50	.50	.50
Pentachlorobenzene	2	0	.50	.50	.50
Phenol	3	0	.42	.42	.42
Styrene	2	0	.40	.40	.40
Toluene	2	0	.40	.40	.40
o-Xylene	2	0	.40	.40	.40
Chloroform	2	0	.29	.29	.29
m-Cresol	3	0	.29	.29	.29
p-Cresol	3	0	.29	.29	.29
1,2-Dichloroethane	2	0	.25	.25	.25
Bromodichloromethane	2	0	.25	.25	.25
Benzene	2	0	.20	.20	.20

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.26 STRATHCONA PAPER COMPANY

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Methylene chloride	2	50	.71	50.00	25.35
Zinc	2	50	.30	8.00	4.15
Isopimaric Acid	2	50	.80	3.40	2.20
Pimaric Acid	2	50	.60	2.60	1.60
Copper	2	50	.30	1.70	1.00
1,2-Dichloroethane	2	50	.64	1.02	.83
Chlorodehydroabietic Acid	2	0	.80	.80	.80
Levopimaric Acid	2	0	.80	.80	.80
Chloroform	2	0	.79	.79	.79
Abietic Acid	2	0	.60	.60	.60
Dehydroabietic Acid	2	0	.60	.60	.60
Neoabietic Acid	2	0	.60	.60	.60
Oleic Acid	2	0	.60	.60	.60
Aluminum	2	0	.32	.67	.50
Bromodichloromethane	2	0	.49	.49	.49
Toluene	2	0	.48	.48	.48
Trichloroethylene	2	0	.48	.48	.48
Hexachlorocyclopentadiene	2	0	.40	.40	.40
Benzene	2	0	.38	.38	.38
o-Xylene	2	0	.38	.38	.38
1,2,3-Trichlorobenzene	2	0	.30	.30	.30
1,1-Dichloroethane	2	0	.25	.25	.25
Dibromochloromethane	2	0	.22	.22	.22
1,2,4-Trichlorobenzene	2	0	.20	.20	.20
Tetrachloroethylene	2	0	.19	.19	.19
m-Xylene and p-Xylene	2	0	.19	.19	.19
Phenol	2	0	.16	.16	.16
Pentachlorophenol	2	0	.14	.14	.14
Chromium	2	0	.10	.15	.13
m-Cresol	2	0	.13	.13	.13
p-Cresol	2	0	.13	.13	.13
1,1-Dichloroethylene	2	0	.11	.11	.11
Naphthalene	2	0	.11	.11	.11
1,2,3,4-Tetrachlorobenzene	2	0	.10	.10	.10
2-Methylnaphthalene	2	0	.10	.10	.10

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

DETECTION FREQUENCIES AND CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT TRAVELLING BLANKS (cont'd)

Table 3.27 TRENT VALLEY DIVISION (PAPERBOARD INDUSTRIES CORP.)

PARAMETER	NUMBER OF OBSERVATIONS	% >RMDL	CONCENTRATION RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Methylene chloride	2	50	.71	16.92	8.82
Oleic Acid	2	50	.60	5.40	3.00
Chlorodehydroabietic Acid	2	50	.80	2.60	1.60
Dehydroabietic Acid	2	50	.60	2.40	1.60
Isopimaric Acid	2	50	.80	2.00	1.40
1,2-Dichloroethane	2	50	.64	1.02	.83
Levopimaric Acid	2	0	.80	.80	.80
Chloroform	2	0	.79	.79	.79
Abietic Acid	2	0	.60	.60	.60
Neoabietic Acid	2	0	.60	.60	.60
Pimaric Acid	2	0	.60	.60	.60
Bromodichloromethane	2	0	.49	.49	.49
Toluene	2	0	.48	.48	.48
Trichloroethylene	2	0	.48	.48	.48
Hexachlorocyclopentadiene	2	0	.40	.40	.40
Benzene	2	0	.38	.38	.38
o-Xylene	2	0	.38	.38	.38
Aluminum	2	0	.32	.32	.32
1,2,3-Trichlorobenzene	2	0	.30	.30	.30
Copper	2	0	.30	.30	.30
Zinc	2	0	.30	.30	.30
1,1-Dichloroethane	2	0	.25	.25	.25
Dibromochloromethane	2	0	.22	.22	.22
1,2,4-Trichlorobenzene	2	0	.20	.20	.20
Tetrachloroethylene	2	0	.19	.19	.19
m-Xylene and p-Xylene	2	0	.19	.19	.19
Phenol	2	0	.16	.16	.16
Pentachlorophenol	2	0	.14	.14	.14
Chromium	2	0	.10	.15	.13
m-Cresol	2	0	.13	.13	.13
p-Cresol	2	0	.13	.13	.13
1,1-Dichloroethylene	2	0	.11	.11	.11
Naphthalene	2	0	.11	.11	.11
1,2,3,4-Tetrachlorobenzene	2	0	.10	.10	.10
2-Methylnaphthalene	2	0	.10	.10	.10

NOTE: (1) Concentration Ratio = concentration divided by Regulation Method Detection Limit

APPENDIX I

Range of Recoveries and Ratio of Spiked Quantity to Regulation Method Detection Limit for Candidate Parameters in Process Effluent

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY TO REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT

Table 4.1 ABITIBI-PRICE INC., IROQUOIS FALLS DIVISION

ATG	PARAMETER	NOBS	RECOVERY (2) (%) MINIMUM	MAXIMUM	AVERAGE	SPIKE / RMDL
9	Aluminum	2	101	120	111	20.000
	Zinc	2	101	107	104	55.000
	Copper	2	94	106	100	27.500
16	Methylene chloride	2	175	521	348	3.258
	1,2-Dichloroethane	2	106	163	135	5.294
	Chloroform	2	96	133	115	6.050
	Chloromethane	2	64	113	89	1.711
	Bromodichloromethane	2	15	103	59	5.294
17	Toluene	2	106	109	108	8.470
	o-Xylene	2	98	99	99	8.470
	Styrene	2	92	98	95	8.470
	Benzene	2	41	119	80	8.470
19	Benzo(g,h,i)perylene	1	113	113	113	5.714
	Dibenz(a,h)anthracene	1	113	113	113	3.077
	Benzo(k)fluoranthene	2	85	102	94	6.429
	Camphene	2	0	84	42	592.143
20	m-Cresol	2	91	105	98	8.184
	p-Cresol	2	40	89	65	8.921
	Phenol	2	36	74	55	11.594
23	Pentachlorobenzene	2	85	100	93	8.500
	2,4,5-Trichlorotoluene	2	81	86	84	8.500
	1,2,3-Trichlorobenzene	2	82	83	83	8.500
	1,2,4-Trichlorobenzene	2	69	94	82	8.500
26	Oehydroabietic Acid	8	70	152	112	48.400

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY TO REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.2a ABITIBI-PRICE INC., FORT WILLIAM DIVISION
Control Point 0100

			RECOVERY (2) (%)			SPIKE /
ATG	PARAMETER	NOBS	MINIMUM	MAXIMUM	AVERAGE	RMDL
9	Copper	1	104	104	104	50.000
	Zinc	1	101	101	101	100.000
	Aluminum	1	95	95	95	33.333
16	Methylene chloride	1	186	186	186	4.846
	1,2-Dichloroethane	1	113	113	113	7.875
	Chloroform	1	106	106	106	9.000
	Bromodichloromethane	1	97	97	97	7.875
	Chloromethane	1	55	55	55	2.541
17	Benzene	1	141	141	141	12.600
	Toluene	1	108	108	108	12.600
	Styrene	1	103	103	103	12.600
	o-Xylene	1	97	97	97	12.600
19	Dibenz(a,h)anthracene	1	124	124	124	3.077
	Benzo(k)fluoranthene	2	74	122	98	6.429
	Benzo(g,h,i)perylene	1	65	65	65	5.714
	Camphene	2	21	86	54	1.306
20	m-Cresol	1	87	87	87	9.088
	p-Cresol	1	39	39	39	9.914
	Phenol	1	36	36	36	12.875
23	1,2,4-Trichlorobenzene	2	96	107	102	8.500
	Pentachlorobenzene	2	92	98	95	8.500
	2,4,5-Trichlorotoluene	2	85	93	89	8.500
	1,2,3-Trichlorobenzene	2	84	86	85	8.500
26	Dehydroabietic Acid	5	95	133	110	46.000

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY
TO REGULATION METHOD DETECTION LIMIT
FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.2b ABITIBI-PRICE INC., FORT WILLIAM DIVISION
Control Point 0200

ATG	PARAMETER	NOBS	RECOVERY (2) (%) MINIMUM	MAXIMUM	AVERAGE	SPIKE / RMDL
9	Zinc	1	110	110	110	10.000
	Copper	1	96	96	96	5.000
	Aluminum	1	90	90	90	6.667
16	Chloromethane	1	144	144	144	.881
	Chloroform	1	85	85	85	3.100
	Methylene chloride	1	83	83	83	1.669
	1,2-Dichloroethane	1	80	80	80	2.712
	Bromodichloromethane	1	15	15	15	2.712
17	Toluene	1	118	118	118	4.340
	o-Xylene	1	87	87	87	4.340
	Styrene	1	86	86	86	4.340
	Benzene	1	29	29	29	4.340
19	Benzo(k)fluoranthene	1	138	138	138	5.714
	Camphene	1	73	73	73	1.183
	Benzo(g,h,i)perylene	1	43	43	43	5.714
	Dibenz(a,h)anthracene	1	34	34	34	3.077
20	m-Cresol	1	89	89	89	7.279
	p-Cresol	1	79	79	79	7.929
	Phenol	1	61	61	61	10.313
26	Dehydroabietic Acid	2	128	131	130	64.400

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY TO REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.3 ABITIBI-PRICE INC., PROVINCIAL PAPERS DIVISION

			RECOVERY (2) (%)			SPIKE / RMDL
ATG	PARAMETER	NOBS	MINIMUM	MAXIMUM	AVERAGE	
9	Zinc	2	101	114	108	55.000
	Copper	2	102	106	104	27.500
	Aluminum	2	93	100	97	20.000
16	Methylene chloride	2	110	521	316	3.258
	Chloromethane	2	73	537	305	1.711
	Chloroform	2	57	125	91	6.050
	1,2-Dichloroethane	2	52	62	57	5.294
	Bromodichloromethane	2	23	63	43	5.294
17	o-Xylene	2	60	103	82	8.470
	Styrene	2	51	105	78	8.470
	Toluene	2	51	85	68	8.470
	Benzene	2	35	37	36	8.470
19	Benzo(k)fluoranthene	2	113	125	119	5.714
	Dibenz(a,h)anthracene	1	110	110	110	3.077
	Camphene	2	51	66	59	1.183
	Benzo(g,h,i)perylene	1	31	31	31	5.714
20	m-Cresol	2	89	121	105	7.279
	p-Cresol	2	54	79	67	7.929
	Phenol	2	42	64	53	10.313
23	1,2,4-Trichlorobenzene	2	77	121	99	7.500
	Pentachlorobenzene	2	77	120	99	7.500
	2,4,5-Trichlorotoluene	2	72	124	98	7.500
	1,2,3-Trichlorobenzene	2	73	113	93	7.500
26	Dehydroabietic Acid	8	83	153	117	48.400

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY TO REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.4 ABITIBI-PRICE INC., THUNDER BAY DIVISION

ATG	PARAMETER	NOBS	RECOVERY (2) (%) MINIMUM	MAXIMUM	AVERAGE	SPIKE / RMDL
9	Aluminum	2	106	130	118	20.000
	Copper	2	86	104	95	27.500
	Zinc	2	80	102	91	55.000
16	Methylene chloride	2	184	922	553	3.258
	Chloromethane	2	60	675	368	1.711
	Chloroform	2	52	100	76	6.050
	1,2-Dichloroethane	2	32	108	70	5.294
	Bromodichloromethane	2	20	95	58	5.294
17	Toluene	2	52	100	76	8.470
	Benzene	2	42	105	74	8.470
	Styrene	2	40	95	68	8.470
	o-Xylene	2	44	92	68	8.470
19	Benzo(g,h,i)perylene	1	104	104	104	7.143
	Camphene	2	95	106	101	1.306
	Benzo(k)fluoranthene	2	90	104	97	6.429
	Dibenz(a,h)anthracene	1	95	95	95	3.846
20	m-Cresol	2	76	121	99	7.279
	p-Cresol	2	55	68	62	7.929
	Phenol	2	52	53	53	10.313
23	Pentachlorobenzene	2	77	84	81	7.500
	2,4,5-Trichlorotoluene	2	71	81	76	7.500
	1,2,3-Trichlorobenzene	2	71	73	72	7.500
	1,2,4-Trichlorobenzene	2	67	75	71	7.500
26	Dehydroabietic Acid	8	1	153	109	48.400

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY TO REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.5 BEAVER WOOD FIBRE COMPANY

			RECOVERY (2) (%)			SPIKE /
ATG	PARAMETER	NOBS	MINIMUM	MAXIMUM	AVERAGE	RMDL
9	Chromium	2	116	118	117	13.750
	Zinc	2	108	113	111	55.000
	Copper	2	98	112	105	27.500
	Aluminum	2	100	103	102	20.000
16	Trichloroethylene	2	122	205	164	2.763
	1,2-Dichloroethane	2	62	188	125	6.563
	Bromodichloromethane	2	70	105	88	6.563
	Dibromochloromethane	2	84	90	87	4.773
	Tetrachloroethylene	2	79	95	87	4.773
	Chloroform	2	74	83	79	7.500
	1,1-Dichloroethane	2	72	81	77	8.625
	Methylene chloride	2	30	106	68	4.038
	1,1-Dichloroethylene	2	23	51	37	2.250
17	Benzene	2	63	229	146	10.500
	m-Xylene and p-Xylene	2	92	112	102	4.773
	o-Xylene	2	89	110	100	10.500
	Toluene	2	76	121	99	10.500
19	Naphthalene	2	80	117	99	2.813
	2-Methylnaphthalene	2	79	112	96	2.070
20	m-Cresol	2	125	177	151	8.184
	Pentachlorophenol	2	36	109	73	21.873
	p-Cresol	2	57	76	67	8.921
	Phenol	2	46	66	56	11.594
23	1,2,4-Trichlorobenzene	1	88	88	88	7.500
	1,2,3,4-Tetrachlorobenzene	1	84	84	84	7.500
	Hexachlorocyclopentadiene	1	84	84	84	7.500
	1,2,3-Trichlorobenzene	1	79	79	79	7.500
26	Dehydroabietic Acid	1	141	141	141	51.000

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY TO REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.6 BOISE CASCADE CANADA LTD., FORT FRANCES

ATG	PARAMETER	NOBS	RECOVERY (2) (%) MINIMUM	MAXIMUM	AVERAGE	SPIKE / RMDL
9	Zinc	1	174	174	174	3.000
	Nickel	1	120	120	120	1.500
	Molybdenum	1	104	104	104	.700
	Vanadium	1	104	104	104	1.000
	Aluminum	1	103	103	103	10.000
	Chromium	1	103	103	103	.750
	Copper	1	103	103	103	3.000
	Thallium	1	83	83	83	1.000
12	Mercury	1	102	102	102	2.000
15	Sulphide	1	100	100	100	20.400
16	1,2-Dichloroethane	2	102	114	108	62.500
	Chloroform	2	102	114	108	71.429
	Bromodichloromethane	2	88	106	97	93.750
	Methylene chloride	2	64	112	88	38.462
17	Styrene	2	100	114	107	100.000
	Toluene	2	102	104	103	100.000
	Benzene	2	80	106	93	100.000
19	Fluoranthene	2	52	119	86	125.000
	Naphthalene	2	73	94	84	31.250
	Phenanthrene	2	75	76	76	125.000
	Acenaphthylene	2	69	74	72	35.714
	Camphene	2	51	70	61	16.857
	Pyrene	2	49	52	51	125.000
	Dibenz(a,h)anthracene	2	16	81	49	38.462
	Benzo(g,h,i)perylene	2	16	69	43	71.429
	Benzo(k)fluoranthene	2	33	52	43	71.429
	Chrysene	2	25	44	35	166.667
20	o-Cresol	2	81	101	91	13.514
	2,4-Dichlorophenol	2	74	105	90	29.412
	2,4,6-Trichlorophenol	2	75	79	77	38.462
	2,3,5-Trichlorophenol	2	72	76	74	30.000
	m-Cresol	2	62	76	69	32.941
	p-Cresol	1	62	62	62	30.571
	Phenol	2	35	57	46	20.833
23	1,2,4,5-Tetrachlorobenzene	2	48	68	58	20.100
	1,2,3-Trichlorobenzene	2	47	60	54	20.100
	Pentachlorobenzene	2	44	62	53	20.200
	1,2,3,5-Tetrachlorobenzene	1	52	52	52	20.000
	Hexachlorobenzene	2	45	52	49	20.000
	2,4,5-Trichlorotoluene	2	39	40	40	20.100
	Hexachloroethane	2	36	42	39	20.100
	1,2,3,4-Tetrachlorobenzene	2	23	42	33	20.300
	1,2,4-Trichlorobenzene	2	5	59	32	20.500
	Hexachlorobutadiene	1	27	27	27	20.000
	Hexachlorocyclopentadiene	1	8	8	8	20.000
24	Total H7CDF	1	70	70	70	16.667
	Total H6CDF	1	60	60	60	25.000
	Total H6CDD	1	58	58	58	16.667
	Total PCDD	1	54	54	54	25.000
	Total H7CDD	1	52	52	52	16.667
	Octachlorodibenzo-p-dioxin	1	48	48	48	16.667
	Total PCDF	1	48	48	48	33.333
	2,3,7,8 TCDD	1	46	46	46	25.000
	Total TCDD	1	46	46	46	25.000

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY TO REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.6 (cont'd) BOISE CASCADE CANADA LTD., FORT FRANCES

ATG	PARAMETER	NOBS	RECOVERY (2) (%) MINIMUM	MAXIMUM	AVERAGE	SPIKE / RMDL
24	Octachlorodibenzofuran	1	44	44	44	16.667
	Total TCDF	1	42	42	42	33.333
26	Chlorodehydroabietic Acid	3	25	3,540	1,210	9.000
	Abietic Acid	3	25	1,220	429	8.400
	Isopimaric Acid	3	25	860	320	8.400
	Oleic Acid	3	25	100	66	8.600
	Pimaric Acid	3	25	100	63	9.200
	Dehydroabietic Acid	6	25	105	55	19.400
	Levopimaric Acid	3	18	100	48	8.600
	Neoabietic Acid	3	20	100	48	8.400
PP2	Adsorbable Organic Halide	3	94	97	95	132.200
PP3	Dichlorodehydroabietic Ac.	6	17	131	54	16.200

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY TO REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.7 BOISE CASCADE CANADA LTD., KENORA

			RECOVERY (2) (%)			SPIKE /
ATG	PARAMETER	NOBS	MINIMUM	MAXIMUM	AVERAGE	RMDL
4a	Total Kjeldahl nitrogen	1	93	93	93	9.900
	Ammonia plus Ammonium	1	50	50	50	.200
4b	Nitrate+Nitrite	1	108	108	108	1.600
6	Total phosphorus	1	100	100	100	4.000
9	Aluminum	1	113	113	113	10.000
	Zinc	1	100	100	100	3.000
	Copper	1	93	93	93	3.000
16	1,2-Dichloroethane	2	112	117	115	62.500
	Methylene chloride	2	106	124	115	38.462
	Bromodichloromethane	2	100	125	113	62.500
	Chloroform	2	107	110	109	71.429
	Chloromethane	2	4	120	62	13.514
17	o-Xylene	2	103	114	109	100.000
	Benzene	2	102	104	103	100.000
	Styrene	2	98	101	100	100.000
	Toluene	2	97	102	100	100.000
19	Camphene	2	53	132	93	15.571
	Benzo(g,h,i)perylene	2	53	100	77	36.929
	Dibenz(a,h)anthracene	2	52	100	76	19.769
	Benzo(k)fluoranthene	2	42	100	71	36.286
20	m-Cresol	2	67	82	75	23.088
	p-Cresol	2	67	82	75	22.429
	Phenol	2	36	76	56	20.833
23	1,2,4-Trichlorobenzene	2	36	42	39	15.500
	1,2,3-Trichlorobenzene	2	28	39	34	15.100
	2,4,5-Trichlorotoluene	2	26	35	31	15.100
	Pentachlorobenzene	2	10	23	17	15.200
26	Abietic Acid	3	10	1,420	493	10.400
	Chlorodehydroabietic Acid	3	10	460	181	11.000
	Isopimaric Acid	3	10	100	65	10.400
	Oleic Acid	3	10	100	64	10.600
	Levopimaric Acid	3	10	100	47	10.600
	Dehydroabietic Acid	6	10	88	46	20.400
	Neoabietic Acid	3	10	100	44	10.400
	Pimaric Acid	3	10	100	42	11.200

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY TO REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.8 CANADIAN PACIFIC FOREST PRODUCTS LTD., DRYDEN

			RECOVERY (2) (%)			SPIKE /
ATG	PARAMETER	NOBS	MINIMUM	MAXIMUM	AVERAGE	RMDL
15	Sulphide	2	105	105	105	43.000
16	Bromodichloromethane	2	107	134	121	62.500
	1,2-Dichloroethane	2	102	111	107	62.500
	Chloroform	2	98	110	104	71.429
	Methylene chloride	2	95	104	100	38.462
17	Benzene	2	121	126	124	100.000
	Toluene	2	107	110	109	100.000
	Styrene	2	102	112	107	100.000
19	Acenaphthylene	2	55	84	70	35.714
	Naphthalene	2	52	87	70	31.250
	Phenanthrene	2	61	76	69	125.000
	Fluoranthene	2	50	60	55	125.000
	Pyrene	2	47	62	55	125.000
	Camphene	2	33	58	46	16.857
	Benzo(g,h,i)perylene	2	17	64	41	71.429
	Chrysene	2	19	62	41	166.667
	Benzo(k)fluoranthene	2	21	58	40	71.429
	Dibenz(a,h)anthracene	2	17	61	39	38.462
20	2,4-Dichlorophenol	2	62	95	79	29.412
	2,4,6-Trichlorophenol	2	63	86	75	38.462
	2,3,5-Trichlorophenol	2	62	85	74	30.000
	o-Cresol	2	65	83	74	13.514
	Phenol	2	33	42	38	20.833
23	1,2,3,5-Tetrachlorobenzene	1	72	72	72	20.000
	1,2,3-Trichlorobenzene	2	50	78	64	20.000
	2,4,5-Trichlorotoluene	2	48	78	63	20.400
	Pentachlorobenzene	2	37	83	60	20.700
	Hexachlorobenzene	2	36	73	55	20.400
	1,2,3,4-Tetrachlorobenzene	2	32	67	50	20.100
	1,2,4,5-Tetrachlorobenzene	1	49	49	49	20.200
	Hexachloroethane	2	33	64	49	20.900
	Octachlorostyrene	2	29	68	49	19.200
	1,2,4-Trichlorobenzene	2	4	48	26	21.800
	Hexachlorocyclopentadiene	1	20	20	20	20.400
	Hexachlorobutadiene	1	15	15	15	20.800
24	Total PCDD	1	44	44	44	25.000
	Total H6CDF	1	42	42	42	25.000
	Total H7CDF	1	34	34	34	16.667
	Total PCDF	1	34	34	34	33.333
	Total TCDF	1	34	34	34	33.333
	2,3,7,8 TCDD	1	30	30	30	25.000
	Total H6CDD	1	30	30	30	16.667
	Total TCDD	1	30	30	30	25.000
	Total H7CDD	1	28	28	28	16.667
	Octachlorodibenzo-p-dioxin	1	22	22	22	16.667
	Octachlorodibenzofuran	1	20	20	20	16.667
26	Dehydroabietic Acid	4	29	89	74	21.200
	Isopimaric Acid	2	36	100	68	10.800
	Pimaric Acid	2	30	100	65	11.800
	Chlorodehydroabietic Acid	2	28	100	64	11.400
	Oleic Acid	2	24	100	62	10.800
	Abietic Acid	2	21	100	61	10.600
	Levopimaric Acid	2	5	100	53	10.800
	Neoabietic Acid	2	6	100	53	10.600

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY TO REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.8 (cont'd) CANADIAN PACIFIC FOREST PRODUCTS LTD., DRYDEN

ATG	PARAMETER	NOBS	RECOVERY (2) (%) MINIMUM	MAXIMUM	AVERAGE	SPIKE / RMDL
PP2	Adsorbable Organic Halide	4	91	101	97	123.840
PP3	Dichlorodehydroabietic Ac.	3	89	96	91	21.000

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY TO REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.9 CANADIAN PACIFIC FOREST PRODUCTS LTD., THUNDER BAY

			RECOVERY (2) (%)			SPIKE /
ATG	PARAMETER	NOBS	MINIMUM	MAXIMUM	AVERAGE	RMDL
9	Zinc	1	120	120	120	3.000
	Vanadium	1	119	119	119	1.000
	Chromium	1	116	116	116	.750
	Aluminum	1	110	110	110	10.000
	Copper	1	103	103	103	3.000
	Nickel	1	100	100	100	1.500
	Thallium	1	100	100	100	1.000
	Molybdenum	1	86	86	86	.700
12	Mercury	1	90	90	90	2.000
15	Sulphide	1	106	106	106	21.900
16	Bromodichloromethane	2	100	106	103	93.750
	1,2-Dichloroethane	2	98	100	99	62.500
	Chloroform	2	67	99	83	71.429
	Methylene chloride	2	30	94	62	38.462
17	Toluene	2	102	123	113	100.000
	Styrene	2	98	102	100	100.000
	Benzene	2	68	128	98	100.000
19	Acenaphthylene	2	62	67	65	53.571
	Naphthalene	2	61	67	64	46.875
	Phenanthrene	2	46	68	57	187.500
	Fluoranthene	2	23	59	41	187.500
	Pyrene	2	15	62	39	187.500
	Chrysene	2	3	57	30	250.000
	Benzo(g,h,i)perylene	2	2	53	28	107.143
	Dibenz(a,h)anthracene	2	2	54	28	57.692
	Camphene	2	13	41	27	23.429
	Benzo(k)fluoranthene	2	3	37	20	107.143
20	2,4,6-Trichlorophenol	2	67	97	82	57.692
	2,4-Dichlorophenol	2	69	79	74	44.118
	2,3,5-Trichlorophenol	2	65	69	67	55.769
	o-Cresol	2	52	70	61	20.270
	p-Cresol	1	45	45	45	30.286
	Phenol	2	32	34	33	52.083
	m-Cresol	1	21	21	21	58.824
23	1,2,3,5-Tetrachlorobenzene	1	75	75	75	20.000
	2,4,5-Trichlorotoluene	2	51	68	60	20.400
	1,2,3-Trichlorobenzene	2	51	63	57	20.000
	Pentachlorobenzene	2	43	62	53	20.700
	1,2,4,5-Tetrachlorobenzene	1	52	52	52	20.200
	Hexachlorobenzene	2	46	50	48	20.400
	Octachlorostyrene	2	40	47	44	19.200
	1,2,3,4-Tetrachlorobenzene	2	33	52	43	20.100
	1,2,4-Trichlorobenzene	2	4	50	27	21.800
	Hexachlorocyclopentadiene	1	25	25	25	20.400
	Hexachloroethane	2	5	32	19	20.900
	Hexachlorobutadiene	1	17	17	17	20.800
26	Oleic Acid	2	36	260	148	10.800
	Dehydroabietic Acid	6	41	146	94	90.600
	Chlorodehydroabietic Acid	2	20	120	70	11.400
	Isopimaric Acid	2	36	100	68	10.800
	Pimaric Acid	2	33	100	67	11.800
	Abietic Acid	2	18	100	59	10.600
	Levopimaric Acid	2	8	100	54	10.800
	Neoabietic Acid	2	7	100	54	10.600

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY
TO REGULATION METHOD DETECTION LIMIT
FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.9 (cont'd) CANADIAN PACIFIC FOREST PRODUCTS LTD., THUNDER BAY

			RECOVERY (2) (%)			SPIKE /
ATG	PARAMETER	NOBS	MINIMUM	MAXIMUM	AVERAGE	RMDL
PP2	Adsorbable Organic Halide	3	89	98	92	132.200
PP3	Dichlorodehydroabietic Ac.	2	66	82	74	150.000

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY TO REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.10 DOMTAR INC., FINE PAPERS DIVISION (CORNWALL)

			RECOVERY (2) (%)			SPIKE /
ATG	PARAMETER	NOBS	MINIMUM	MAXIMUM	AVERAGE	RMDL
16	Methylene chloride	2	104	122	113	3.846
	Bromodichloromethane	2	106	114	110	6.250
	1,2-Dichloroethane	2	92	116	104	6.250
	Chloroform	2	100	108	104	7.143
17	Toluene	2	100	102	101	10.000
	Benzene	2	70	106	88	10.000
	Styrene	2	73	100	87	3.000
19	Benzo(k)fluoranthene	2	85	95	90	17.857
	Benzo(g,h,i)perylene	2	80	91	86	17.857
	Chrysene	2	83	85	84	41.667
	Dibenz(a,h)anthracene	2	69	84	77	9.615
	Phenanthrene	2	70	79	75	31.250
	Fluoranthene	2	66	80	73	31.250
	Pyrene	2	66	80	73	31.250
	Naphthalene	2	67	74	71	7.813
	Acenaphthylene	2	59	69	64	8.929
	Camphene	2	45	57	51	8.429
20	o-Cresol	2	68	87	78	7.081
	2,4-Dichlorophenol	2	66	80	73	14.706
	2,3,5-Trichlorophenol	2	65	77	71	19.923
	2,4,6-Trichlorophenol	2	66	71	69	19.231
	Phenol	2	45	47	46	10.417
23	1,2,4,5-Tetrachlorobenzene	2	66	132	99	37.500
	1,2,3-Trichlorobenzene	2	68	80	74	25.000
	1,2,3,4-Tetrachlorobenzene	2	71	74	73	25.000
	Pentachlorobenzene	2	69	72	71	12.500
	1,2,3,5-Tetrachlorobenzene	2	67	73	70	25.000
	Octachlorostyrene	2	62	75	69	6.300
	2,4,5-Trichlorotoluene	2	66	69	68	50.000
	Hexachlorocyclopentadiene	2	55	79	67	18.800
	1,2,4-Trichlorobenzene	2	64	67	66	50.000
	Hexachlorobutadiene	2	57	62	60	6.300
	Hexachloroethane	2	54	59	57	6.300
	Hexachlorobenzene	2	32	70	51	6.300
26	Isopimaric Acid	2	94	110	102	100.000
	Dehydroabietic Acid	6	89	114	97	100.000
	Chlorodehydroabietic Acid	1	94	94	94	100.000
	Pimaric Acid	2	87	94	91	100.000
	Abietic Acid	2	85	93	89	100.000
	Oleic Acid	2	85	87	86	100.000
	Neoabietic Acid	2	71	90	81	100.000
PP2	Adsorbable Organic Halide	6	90	110	100	2.000
PP3	Dichlorodehydroabietic Ac.	6	57	135	102	100.000

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY TO REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.11 DOMTAR INC., CONTAINERBOARD DIVISION (RED ROCK)

ATG	PARAMETER	NOBS	RECOVERY (2) (%) MINIMUM	MAXIMUM	AVERAGE	SPIKE / RMDL
9	Aluminum	1	100	100	100	6.667
	Chromium	1	95	95	95	10.000
	Copper	1	95	95	95	20.000
	Nickel	1	95	95	95	10.000
	Zinc	1	95	95	95	20.000
	Vanadium	1	90	90	90	6.667
	Molybdenum	1	55	55	55	10.000
	Thallium	1	15	15	15	6.667
12	Mercury	1	48	48	48	10.000
16	Methylene chloride	2	104	106	105	3.846
	Bromodichloromethane	2	98	106	102	6.250
	1,2-Dichloroethane	2	84	118	101	6.250
	Chloroform	2	92	104	98	7.143
17	Styrene	2	113	120	117	3.000
	Toluene	2	108	118	113	10.000
	Benzene	2	80	100	90	10.000
19	Benzo(k)fluoranthene	2	78	171	125	17.857
	Dibenz(a,h)anthracene	2	78	152	115	9.615
	Benzo(g,h,i)perylene	2	84	129	107	17.857
	Pyrene	2	78	117	98	31.250
	Fluoranthene	2	73	115	94	31.250
	Chrysene	2	78	95	87	41.667
	Phenanthrene	2	73	97	85	31.250
	Acenaphthylene	2	59	87	73	8.929
	Naphthalene	2	61	82	72	7.813
	Camphene	2	46	49	48	8.429
20	2,4-Dichlorophenol	2	71	86	79	14.706
	2,4,6-Trichlorophenol	2	64	89	77	19.231
	o-Cresol	2	74	75	75	7.081
	2,3,5-Trichlorophenol	2	70	77	74	19.923
	Phenol	2	44	57	51	10.417
23	Hexachlorobenzene	2	83	92	88	6.300
	1,2,3,4-Tetrachlorobenzene	2	86	87	87	25.000
	1,2,4,5-Tetrachlorobenzene	2	83	88	86	37.500
	1,2,3,5-Tetrachlorobenzene	2	78	92	85	25.000
	1,2,3-Trichlorobenzene	2	81	89	85	25.000
	Pentachlorobenzene	2	84	85	85	12.500
	Octachlorostyrene	2	78	90	84	6.300
	1,2,4-Trichlorobenzene	2	77	88	83	50.000
	Hexachlorobutadiene	2	63	98	81	6.300
	2,4,5-Trichlorotoluene	2	76	78	77	50.000
	Hexachloroethane	2	60	73	67	6.300
	Hexachlorocyclopentadiene	2	54	71	63	18.800
26	Dehydroabietic Acid	5	51	111	94	100.000
	Abietic Acid	2	35	103	69	100.000
	Pimaric Acid	2	31	105	68	100.000
	Isopimaric Acid	2	28	105	67	100.000
	Chlorodehydroabietic Acid	2	28	99	64	100.000
	Oleic Acid	2	9	115	62	100.000
	Neoabietic Acid	2	27	62	45	100.000

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY TO REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.11 (cont'd) DOMTAR INC., CONTAINERBOARD DIVISION (RED ROCK)

ATG	PARAMETER	NOBS	RECOVERY (2) (%) MINIMUM	MAXIMUM	AVERAGE	SPIKE / RMDL
PP2	Adsorbable Organic Halide	2	100	100	100	2.000
PP3	Dichlorodehydroabietic Ac.	5	15	117	75	100.000

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY TO REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.12 DOMTAR INC., FINE PAPERS DIVISION (ST. CATHARINES)

ATG	PARAMETER	NOBS	RECOVERY (2) (%) MINIMUM	MAXIMUM	AVERAGE	SPIKE / RMDL
9	Zinc	2	105	113	109	55.000
	Aluminum	2	104	110	107	20.000
	Copper	2	100	102	101	27.500
	Chromium	2	92	103	98	13.750
16	Methylene chloride	2	100	270	185	3.577
	1,1-Dichloroethylene	2	100	137	119	1.661
	Bromodichloromethane	2	100	135	118	5.813
	Trichloroethylene	2	100	130	115	2.447
	1,1-Dichloroethane	2	100	117	109	6.375
	Dibromochloromethane	2	100	114	107	4.227
	Tetrachloroethylene	2	100	113	107	4.227
	Chloroform	2	100	110	105	6.643
	1,2-Dichloroethane	2	100	100	100	6.438
17	m-Xylene and p-Xylene	2	100	106	103	4.227
	Toluene	2	100	103	102	9.300
	o-Xylene	2	100	102	101	9.300
	Benzene	2	65	100	83	9.300
19	2-Methylnaphthalene	2	100	174	137	1.841
	Naphthalene	2	102	142	122	2.500
20	m-Cresol	2	105	170	138	7.279
	p-Cresol	2	77	108	93	7.929
	Pentachlorophenol	2	1	155	78	19.438
	Phenol	2	54	73	64	10.313
23	1,2,4-Trichlorobenzene	2	75	107	91	7.500
	1,2,3-Trichlorobenzene	2	76	91	84	7.500
	1,2,3,4-Tetrachlorobenzene	2	71	84	78	7.500
	Hexachlorocyclopentadiene	2	23	43	33	7.500
26	Dehydroabietic Acid	2	136	148	142	37.000

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY TO REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.13 DOMTAR INC., CONTAINERBOARD DIVISION (TRENTON)

ATG	PARAMETER	NOBS	RECOVERY (2) (%) MINIMUM	MAXIMUM	AVERAGE	SPIKE / RMDL
9	Aluminum	2	105	110	108	6.667
	Chromium	2	100	105	103	10.000
	Copper	2	100	105	103	20.000
	Cadmium	2	97	104	101	100.000
	Lead	2	100	100	100	6.667
	Nickel	2	95	105	100	10.000
	Zinc	2	95	105	100	20.000
	Cobalt	2	95	100	98	10.000
	Vanadium	2	95	100	98	6.667
	Molybdenum	2	55	110	83	7.500
	Thallium	2	15	100	58	3.833
16	Chloroform	2	102	104	103	7.143
20	o-Cresol	2	84	86	85	7.081
	Phenol	2	52	60	56	10.417
26	Dehydroabietic Acid	6	89	124	101	100.000
	Isopimaric Acid	2	95	98	97	100.000
	Pimaric Acid	2	96	98	97	100.000
	Chlorodehydroabietic Acid	2	94	98	96	100.000
	Abietic Acid	2	93	97	95	100.000
	Neoabietic Acid	2	93	96	95	100.000
	Oleic Acid	2	93	97	95	100.000

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY TO REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.14 E.B. EDDY FOREST PRODUCTS LTD., ESPANOLA

ATG	PARAMETER	NOBS	RECOVERY (2) (%) MINIMUM	 MAXIMUM	 AVERAGE	SPIKE / RMDL
9	Zinc	2	103	120	112	55.000
	Nickel	4	101	125	110	5.563
	Chromium	4	96	110	104	13.750
	Thallium	4	102	108	104	18.333
	Vanadium	4	98	110	104	9.167
	Aluminum	2	99	104	102	18.333
	Copper	4	100	104	102	27.500
	Molybdenum	4	68	96	86	13.750
12	Mercury	4	21	105	83	32.500
16	Methylene chloride	3	120	211	162	3.872
	Chloroform	3	96	108	100	7.190
	1,2-Dichloroethane	3	68	113	96	6.291
	Bromodichloromethane	3	17	116	75	6.291
17	Toluene	3	92	100	97	10.066
	Styrene	3	44	105	81	10.066
	Benzene	3	15	94	58	10.066
19	Chrysene	4	104	150	134	14.167
	Dibenz(a,h)anthracene	3	124	139	134	3.077
	Pyrene	4	104	131	119	10.625
	Acenaphthylene	4	95	135	116	3.036
	Phenanthrene	4	93	135	116	10.625
	Fluoranthene	4	79	128	111	10.625
	Benzo(g,h,i)perylene	4	44	158	108	6.071
	Benzo(k)fluoranthene	4	64	136	108	6.071
	Naphthalene	4	92	112	103	2.656
	Camphene	4	35	83	68	1.257
20	2,4,6-Trichlorophenol	4	100	166	136	19.615
	2,3,5-Trichlorophenol	4	101	153	128	20.222
	m-Cresol	4	91	155	126	7.732
	2,4-Dichlorophenol	4	57	99	85	15.787
	o-Cresol	4	54	100	85	6.750
	p-Cresol	4	48	105	75	8.425
	Phenol	4	42	69	61	10.953
23	1,2,4-Trichlorobenzene	2	88	93	91	8.500
	Octachlorostyrene	2	85	94	90	8.500
	1,2,3,4-Tetrachlorobenzene	2	80	95	88	8.500
	1,2,3,5-Tetrachlorobenzene	2	75	95	85	8.500
	Pentachlorobenzene	2	69	101	85	8.500
	2,4,5-Trichlorotoluene	2	75	93	84	8.500
	1,2,4,5-Tetrachlorobenzene	2	71	88	80	8.500
	Hexachlorobenzene	2	72	87	80	8.500
	1,2,3-Trichlorobenzene	2	72	84	78	8.500
	Hexachlorobutadiene	2	73	80	77	8.500
	Hexachloroethane	2	76	78	77	8.500
	Hexachlorocyclopentadiene	2	60	63	62	8.500
26	Dehydroabietic Acid	10	76	153	117	36.800

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY
TO REGULATION METHOD DETECTION LIMIT
FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.14 (cont'd) E.B. EDDY FOREST PRODUCTS LTD., ESPANOLA

			RECOVERY (2) (%)			SPIKE /
ATG	PARAMETER	NOBS	MINIMUM	MAXIMUM	AVERAGE	RMDL
PP2	Adsorbable Organic Halide	7	96	113	99	1145.720
PP3	Dichlorodehydroabietic Ac.	8	43	136	89	16.400

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY TO REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.15 E.B. EDDY FOREST PRODUCTS LTD., OTTAWA

ATG	PARAMETER	NOBS	RECOVERY (2) (%) MINIMUM	MAXIMUM	AVERAGE	SPIKE / RMDL
9	Zinc	2	50	104	77	10.000
	Copper	2	44	106	75	5.000
	Aluminum	2	33	104	69	6.667
	Chromium	2	44	94	69	2.500
16	1,1-Dichloroethylene	2	74	234	154	1.661
	Bromodichloromethane	2	111	135	123	5.813
	Trichloroethylene	2	87	138	113	2.447
	Chloroform	2	84	134	109	6.643
	Oibromochloromethane	2	84	117	101	4.227
	Tetrachloroethylene	2	85	117	101	4.227
	1,2-Dichloroethane	2	91	103	97	5.813
	1,1-Dichloroethane	2	85	103	94	6.375
	Methylene chloride	2	32	67	50	3.577
17	Toluene	2	81	123	102	9.300
	o-Xylene	2	86	105	96	9.300
	m-Xylene and p-Xylene	2	83	93	88	4.227
	Benzene	2	65	102	84	9.300
19	Naphthalene	1	105	105	105	3.125
	2-Methylnaphthalene	1	104	104	104	2.273
20	m-Cresol	2	111	118	115	8.184
	p-Cresol	2	54	110	82	8.921
	Phenol	2	48	70	59	11.594
	Pentachlorophenol	2	12	90	51	21.873
23	1,2,3,4-Tetrachlorobenzene	2	80	95	88	8.500
	1,2,4-Trichlorobenzene	2	79	91	85	8.500
	1,2,3-Trichlorobenzene	2	25	86	56	8.500
	Hexachlorocyclopentadiene	2	35	62	49	8.500
26	Dehydroabietic Acid	2	91	155	123	32.000

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY TO REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.16 JAMES RIVER-MARATHON LTD.

ATG	PARAMETER	NOBS	RECOVERY (2) (%) MINIMUM	MAXIMUM	AVERAGE	SPIKE / RMDL
9	Nickel	2	107	115	111	12.500
	Zinc	2	96	115	106	15.000
	Chromium	2	100	105	103	12.500
	Copper	2	96	105	101	15.000
	Molybdenum	2	98	99	99	12.500
	Aluminum	2	93	100	97	11.667
	Vanadium	2	94	100	97	11.667
	Thallium	2	30	98	64	11.667
12	Mercury	2	70	150	110	35.000
16	Bromodichloromethane	1	100	100	100	21.250
	1,2-Dichloroethane	2	94	94	94	11.789
	Chloroform	2	72	92	82	18.821
	Methylene chloride	2	18	81	50	6.842
17	Benzene	2	95	120	108	22.326
	Styrene	2	82	96	89	26.112
	Toluene	2	36	48	42	30.100
19	Benzo(k)fluoranthene	1	614	614	614	.163
	Benzo(g,h,i)perylene	2	150	722	436	13.927
	Pyrene	1	320	320	320	.313
	Naphthalene	2	86	488	287	5.726
	Dibenz(a,h)anthracene	1	268	268	268	.086
	Chrysene	1	242	242	242	.413
	Acenaphthylene	2	135	320	228	9.295
	Fluoranthene	2	102	313	208	30.285
	Camphene	2	4	410	207	1.975
	Phenanthrene	2	85	315	200	18.157
20	m-Cresol	1	1,200	1,200	1,200	.074
	o-Cresol	2	64	255	160	2.578
	2,3,5-Trichlorophenol	2	93	155	124	7.511
	p-Cresol	2	10	200	105	3.037
	2,4,6-Trichlorophenol	2	73	108	91	7.956
	2,4-Dichlorophenol	2	76	87	82	6.154
	Phenol	2	0	38	19	4.520
23	Hexachloroethane	2	68	430	249	7.000
	2,4,5-Trichlorotoluene	2	87	373	230	7.600
	Octachlorostyrene	2	111	158	135	4.400
	1,2,4,5-Tetrachlorobenzene	2	120	139	130	7.900
	1,2,4-Trichlorobenzene	2	115	124	120	7.400
	1,2,3-Trichlorobenzene	2	108	127	118	8.100
	Pentachlorobenzene	2	101	113	107	8.600
	1,2,3,5-Tetrachlorobenzene	2	90	120	105	9.600
	1,2,3,4-Tetrachlorobenzene	2	93	104	99	7.200
	Hexachlorobenzene	2	80	109	95	7.400
	Hexachlorocyclopentadiene	2	7	81	44	8.300
	Hexachlorobutadiene	2	5	81	43	9.400
26	Dehydroabietic Acid	6	12	30	20	20.000

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY TO REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.16 (cont'd) JAMES RIVER-MARATHON LTD.

ATG	PARAMETER	NOBS	RECOVERY (2) (%) MINIMUM	MAXIMUM	AVERAGE	SPIKE / RMDL
PP2	Adsorbable Organic Halide	1	1,790	1,790	1,790	2.000
PP3	Dichlorodehydroabietic Ac.	3	23	36	30	20.000

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY TO REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.17 KIMBERLY-CLARK CANADA INC., HUNTSVILLE

ATG	PARAMETER	NOBS	RECOVERY (2) (%) MINIMUM	MAXIMUM	AVERAGE	SPIKE / RMDL
9	Aluminum	3	75	120	102	4.889
	Chromium	3	95	110	102	7.333
	Copper	3	100	105	102	14.667
	Zinc	3	100	105	102	14.667
16	Dibromochloromethane	3	84	156	119	4.545
	Trichloroethylene	3	80	190	119	2.632
	Methylene chloride	3	96	118	107	3.846
	1,1-Dichloroethylene	3	80	126	100	1.786
	1,2-Dichloroethane	3	90	110	99	6.250
	Chloroform	3	86	112	98	7.143
	Tetrachloroethylene	3	80	128	98	4.545
	Bromodichloromethane	3	44	138	95	6.250
	1,1-Dichloroethane	3	82	102	91	6.250
17	o-Xylene	3	80	140	109	3.000
	m-Xylene and p-Xylene	3	73	133	104	1.364
	Toluene	3	86	112	101	10.000
	Benzene	3	82	104	95	10.000
19	2-Methylnaphthalene	3	75	130	98	5.227
	Naphthalene	3	44	67	59	7.813
20	m-Cresol	1	93	93	93	7.588
	p-Cresol	1	93	93	93	7.371
	Pentachlorophenol	3	64	84	77	19.231
	Phenol	3	39	45	43	10.417
23	1,2,3,4-Tetrachlorobenzene	3	50	80	68	25.000
	Hexachlorocyclopentadiene	3	39	101	66	18.800
	1,2,3-Trichlorobenzene	3	46	81	65	25.000
	1,2,4-Trichlorobenzene	3	50	72	60	50.000
24	Octachlorodibenzo-p-dioxin	1	100	100	100	66.667
	Total H6CDF	1	98	98	98	200.000
	Total TCDF	1	95	95	95	13.333
26	Dehydroabietic Acid	3	80	120	98	100.000
	Levopimaric Acid	1	96	96	96	200.000
	Neoabietic Acid	3	79	103	90	100.000
	Abietic Acid	3	78	98	89	100.000
	Chlorodehydroabietic Acid	3	84	95	89	83.400
	Isopimaric Acid	3	74	95	88	100.000
	Pimaric Acid	3	71	95	86	100.000
	Oleic Acid	3	68	86	75	100.000

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY TO REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.18 KIMBERLY-CLARK CANADA INC., ST. CATHARINES

			RECOVERY (2) (%)			SPIKE /
ATG	PARAMETER	NOBS	MINIMUM	MAXIMUM	AVERAGE	RMDL
9	Zinc	1	110	110	110	10.000
	Chromium	1	100	100	100	5.000
	Copper	1	100	100	100	10.000
	Aluminum	1	80	80	80	3.333
16	Dibromochloromethane	3	104	138	121	.873
	Trichloroethylene	3	97	129	112	.526
	1,1-Dichloroethane	3	100	117	111	.962
	Bromodichloromethane	3	102	125	110	1.225
	1,2-Dichloroethane	3	88	129	106	1.075
	Tetrachloroethylene	3	93	100	96	.743
	1,1-Dichloroethylene	3	89	107	95	.290
	Chloroform	3	66	100	86	1.133
	Methylene chloride	3	35	89	71	.705
17	Benzene	3	95	106	102	1.654
	m-Xylene and p-Xylene	3	97	109	102	1.045
	o-Xylene	3	97	103	100	2.014
	Toluene	3	66	124	99	1.654
19	2-Methylnaphthalene	2	31	85	58	1.220
	Naphthalene	3	16	74	54	1.621
20	Pentachlorophenol	3	63	546	226	1.872
	Phenol	3	29	204	112	1.014
	p-Cresol	3	46	167	109	.773
	m-Cresol	3	91	131	105	.752
23	1,2,4-Trichlorobenzene	3	50	214	111	225.400
	1,2,3,4-Tetrachlorobenzene	3	53	77	68	29.700
	1,2,3-Trichlorobenzene	3	44	71	61	34.000
	Hexachlorocyclopentadiene	2	1	13	7	180.300

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY TO REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.19 KIMBERLY-CLARK CANADA INC., TERRACE BAY

			RECOVERY (2) (%)			SPIKE / RMDL
ATG	PARAMETER	NOBS	MINIMUM	MAXIMUM	AVERAGE	
9	Aluminum	1	305	305	305	6.667
	Chromium	1	100	100	100	10.000
	Copper	1	95	95	95	20.000
	Nickel	1	95	95	95	10.000
	Vanadium	1	95	95	95	6.667
	Zinc	1	95	95	95	20.000
	Molybdenum	1	55	55	55	10.000
	Thallium	1	15	15	15	6.667
12	Mercury	1	100	100	100	10.000
16	1,2-Dichloroethane	2	108	118	113	6.250
	Chloroform	2	98	124	111	7.143
	Methylene chloride	2	108	112	110	3.846
	Bromodichloromethane	2	82	106	94	6.250
17	Benzene	2	114	120	117	10.000
	Toluene	2	104	106	105	10.000
	Styrene	2	100	107	104	3.000
19	Phenanthrene	2	83	98	91	31.250
	Fluoranthene	2	72	100	86	31.250
	Pyrene	2	71	99	85	31.250
	Acenaphthylene	2	77	85	81	8.929
	Naphthalene	2	57	92	75	7.813
	Benzo(k)fluoranthene	2	39	94	67	17.857
	Chrysene	2	43	89	66	41.667
	Benzo(g,h,i)perylene	2	41	80	61	17.857
	Dibenz(a,h)anthracene	2	39	80	60	9.615
	Camphene	2	26	57	42	8.429
20	2,3,5-Trichlorophenol	2	77	90	84	19.923
	2,4,6-Trichlorophenol	2	67	87	77	19.231
	2,4-Dichlorophenol	2	61	93	77	14.706
	o-Cresol	2	51	88	70	7.081
	Phenol	2	22	62	42	10.417
23	1,2,4,5-Tetrachlorobenzene	2	35	134	85	37.500
	Hexachlorobenzene	2	48	85	67	6.200
	1,2,3-Trichlorobenzene	2	38	92	65	25.000
	Octachlorostyrene	2	39	87	63	6.200
	1,2,3,4-Tetrachlorobenzene	2	40	81	61	25.000
	Pentachlorobenzene	2	40	78	59	12.500
	1,2,3,5-Tetrachlorobenzene	2	36	79	58	25.000
	2,4,5-Trichlorotoluene	2	35	73	54	50.000
	1,2,4-Trichlorobenzene	2	33	72	53	50.000
	Hexachlorocyclopentadiene	2	21	76	49	18.800
	Hexachlorobutadiene	2	19	65	42	6.200
	Hexachloroethane	2	18	63	41	6.200
26	Isopimaric Acid	2	97	123	110	100.000
	Dehydroabietic Acid	8	94	139	107	100.000
	Pimaric Acid	2	99	101	100	100.000
	Abietic Acid	2	97	101	99	100.000
	Oleic Acid	2	90	100	95	100.000
	Chlorodehydroabietic Acid	2	87	97	92	100.000
	Neoabietic Acid	2	71	85	78	100.000

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY TO REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.19 (cont'd) KIMBERLY-CLARK CANADA INC., TERRACE BAY

ATG	PARAMETER	NOBS	RECOVERY (2) (%) MINIMUM	MAXIMUM	AVERAGE	SPIKE / RMDL
PP2	Adsorbable Organic Halide	2	100	100	100	2.000
PP3	Dichlorodehydroabietic Ac.	8	41	123	81	100.000

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY TO REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.20b MACMILLAN BLOEDEL LTD.
Control Point 1300

ATG	PARAMETER	NOBS	RECOVERY (2) (%) MINIMUM	MAXIMUM	AVERAGE	SPIKE / RMDL
9	Zinc	2	113	930	522	8.000
	Chromium	2	105	146	126	17.000
	Vanadium	2	109	133	121	141.667
	Nickel	2	107	120	114	30.000
	Copper	2	102	119	111	40.000
	Lead	2	103	106	105	33.333
	Thallium	2	94	110	102	16.667
	Cobalt	2	86	112	99	34.250
	Aluminum	2	92	103	98	50.000
	Molybdenum	2	93	100	97	50.000
	Cadmium	2	61	120	91	37.500
16	Chloroform	2	98	98	98	57.143
20	o-Cresol	2	92	94	93	1.351
	Phenol	2	84	86	85	4.167

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY
TO REGULATION METHOD DETECTION LIMIT
FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.21 MALETTE KRAFT PULP AND POWER

			RECOVERY (2) (%)			SPIKE /
ATG	PARAMETER	NOBS	MINIMUM	MAXIMUM	AVERAGE	RMDL
9	Copper	2	104	120	112	27.500
	Nickel	2	104	120	112	5.625
	Zinc	2	103	111	107	55.000
	Aluminum	2	103	105	104	20.000
	Thallium	2	93	114	104	18.333
	Vanadium	2	104	104	104	9.167
	Molybdenum	2	90	100	95	13.750
	Chromium	2	86	98	92	13.750
12	Mercury	2	100	100	100	10.000
16	Methylene chloride	2	148	1,571	860	4.038
	Chloroform	2	98	117	108	7.500
	1,2-Dichloroethane	2	90	110	100	6.563
	Bromodichloromethane	2	74	83	79	6.563
17	Benzene	2	114	136	125	10.500
	Toluene	2	98	107	103	10.500
	Styrene	2	74	108	91	10.500
19	Benzo(k)fluoranthene	2	128	172	150	6.429
	Dibenz(a,h)anthracene	2	132	139	136	3.462
	Fluoranthene	2	114	122	118	11.250
	Pyrene	2	114	122	118	11.250
	Chrysene	2	110	123	117	15.000
	Phenanthrene	2	110	122	116	11.250
	Acenaphthylene	2	100	122	111	3.214
	Naphthalene	2	96	120	108	2.813
	Benzo(g,h,i)perylene	2	80	132	106	6.429
	Camphene	2	47	60	54	1.331
20	2,4,6-Trichlorophenol	2	129	136	133	20.769
	2,3,5-Trichlorophenol	2	118	127	123	21.404
	m-Cresol	2	92	137	115	8.184
	2,4-Dichlorophenol	2	69	106	88	16.721
	o-Cresol	2	49	88	69	7.149
	p-Cresol	2	62	68	65	8.921
	Phenol	2	52	59	56	11.594
23	Pentachlorobenzene	1	75	75	75	7.500
	Hexachlorobenzene	1	73	73	73	7.500
	1,2,3,5-Tetrachlorobenzene	1	71	71	71	7.500
	1,2,4,5-Tetrachlorobenzene	1	69	69	69	7.500
	1,2,4-Trichlorobenzene	1	68	68	68	7.500
	Octachlorostyrene	1	67	67	67	7.500
	1,2,3,4-Tetrachlorobenzene	1	65	65	65	7.500
	1,2,3-Trichlorobenzene	1	64	64	64	7.500
	2,4,5-Trichlorotoluene	1	63	63	63	7.500
	Hexachloroethane	1	52	52	52	7.500
	Hexachlorobutadiene	1	51	51	51	7.500
	Hexachlorocyclopentadiene	1	47	47	47	7.500
26	Dehydroabietic Acid	5	0	144	97	8117.800
PP3	Dichlorodehydroabietic Ac.	3	47	98	70	21.400

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY TO REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.22 NORANDA FOREST INC., RECYCLED PAPERS

ATG	PARAMETER	NOBS	RECOVERY (2) (%) MINIMUM	MAXIMUM	AVERAGE	SPIKE / RMDL
9	Zinc	2	101	109	105	55.000
	Chromium	2	101	102	102	13.750
	Aluminum	2	100	102	101	20.000
	Copper	2	94	97	96	27.500
16	1,1-Dichloroethylene	1	98	98	98	1.071
	Bromodichloromethane	1	90	90	90	3.750
	Dibromochloromethane	1	87	87	87	2.727
	Chloroform	1	85	85	85	4.286
	1,1-Dichloroethane	1	80	80	80	4.125
	1,2-Dichloroethane	1	80	80	80	3.750
	Tetrachloroethylene	1	73	73	73	2.727
	Trichloroethylene	1	72	72	72	1.579
	Methylene chloride	1	59	59	59	2.308
17	m-Xylene and p-Xylene	1	82	82	82	2.727
	o-Xylene	1	82	82	82	6.000
	Toluene	1	80	80	80	6.000
	Benzene	1	73	73	73	6.000
19	2-Methylnaphthalene	1	103	103	103	1.841
	Naphthalene	1	103	103	103	2.500
20	m-Cresol	2	75	179	127	7.279
	p-Cresol	2	79	82	81	7.929
	Pentachlorophenol	2	1	141	71	19.438
	Phenol	2	55	74	65	10.313
23	1,2,3,4-Tetrachlorobenzene	1	116	116	116	7.500
	1,2,3-Trichlorobenzene	2	71	147	109	7.500
	1,2,4-Trichlorobenzene	2	76	124	100	7.500
	Hexachlorocyclopentadiene	2	68	71	70	7.500
26	Dehydroabietic Acid	2	133	135	134	37.000

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY TO REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.23 QUEBEC AND ONTARIO PAPER COMPANY LTD.

ATG	PARAMETER	NOBS	RECOVERY (2) (%) MINIMUM	MAXIMUM	AVERAGE	SPIKE / RMDL
9	Copper	2	106	116	111	5.000
	Aluminum	2	95	110	103	6.667
	Zinc	2	97	105	101	10.000
16	Chloroform	1	87	87	87	4.286
	1,2-Dichloroethane	1	77	77	77	3.750
	Bromodichloromethane	1	40	40	40	3.750
	Chloromethane	1	7	7	7	1.216
	Methylene chloride	1	6	6	6	2.308
17	o-Xylene	1	90	90	90	6.000
	Styrene	1	87	87	87	6.000
	Toluene	1	77	77	77	6.000
	Benzene	1	58	58	58	6.000
19	Benzo(k)fluoranthene	1	125	125	125	5.714
	Benzo(g,h,i)perylene	1	99	99	99	5.714
	Camphene	1	81	81	81	1.183
	Dibenz(a,h)anthracene	1	62	62	62	3.077
20	m-Cresol	1	109	109	109	7.279
	p-Cresol	1	105	105	105	7.929
	Phenol	1	69	69	69	10.313
23	Pentachlorobenzene	1	93	93	93	7.500
	2,4,5-Trichlorotoluene	1	83	83	83	7.500
	1,2,4-Trichlorobenzene	1	77	77	77	7.500
	1,2,3-Trichlorobenzene	1	76	76	76	7.500
26	Dehydroabietic Acid	5	67	222	123	28.400

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY TO REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.24 ST. MARYS PAPER INC.

ATG	PARAMETER	NOBS	RECOVERY (2) (%) MINIMUM	MAXIMUM	AVERAGE	SPIKE / RMDL
9	Zinc	1	117	117	117	10.000
	Aluminum	1	100	100	100	6.667
	Copper	1	94	94	94	5.000
16	Chloromethane	2	52	288	170	1.973
	Methylene chloride	2	59	121	90	3.731
	Chloroform	2	70	76	73	6.929
	1,2-Dichloroethane	2	59	70	65	6.063
	Bromodichloromethane	2	25	83	54	6.063
17	Styrene	2	74	100	87	9.700
	o-Xylene	2	71	100	86	9.700
	Toluene	2	53	86	70	9.700
	Benzene	2	24	49	37	9.700
19	Benzo(g,h,i)perylene	2	78	128	103	6.429
	Dibenz(a,h)anthracene	1	100	100	100	3.077
	Benzo(k)fluoranthene	2	86	91	89	6.429
	Camphene	2	85	87	86	1.331
20	m-Cresol	2	81	110	96	8.184
	p-Cresol	2	69	83	76	8.921
	Phenol	2	61	63	62	11.594
23	Pentachlorobenzene	1	81	81	81	7.500
	2,4,5-Trichlorotoluene	1	80	80	80	7.500
	1,2,4-Trichlorobenzene	1	73	73	73	7.500
	1,2,3-Trichlorobenzene	1	72	72	72	7.500
26	Dehydroabietic Acid	6	83	125	104	41.400

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY
TO REGULATION METHOD DETECTION LIMIT
FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.25 SPRUCE FALLS POWER AND PAPER COMPANY LTD.

ATG	PARAMETER	NOBS	RECOVERY (2) (%) MINIMUM	MAXIMUM	AVERAGE	SPIKE / RMDL
9	Zinc	1	175	175	175	4.000
	Aluminum	1	100	100	100	1.333
	Copper	1	100	100	100	4.000
16	Chloromethane	2	99	141	120	2.703
	Methylene chloride	2	88	120	104	3.846
	1,2-Dichloroethane	2	90	102	96	6.250
	Chloroform	2	90	98	94	7.143
	Bromodichloromethane	2	50	102	76	6.250
17	o-Xylene	2	93	107	100	3.000
	Toluene	2	98	100	99	10.000
	Styrene	2	93	93	93	3.000
	Benzene	2	86	96	91	10.000
19	Benzo(g,h,i)perylene	2	23	94	59	17.857
	Benzo(k)fluoranthene	2	39	78	59	17.857
	Dibenz(a,h)anthracene	2	32	85	59	9.615
	Camphene	2	37	68	53	8.429
20	m-Cresol	1	104	104	104	7.588
	p-Cresol	1	104	104	104	7.371
	Phenol	2	53	56	55	10.417
23	1,2,4-Trichlorobenzene	2	67	77	72	50.000
	1,2,3-Trichlorobenzene	2	68	71	70	25.000
	Pentachlorobenzene	2	66	69	68	12.500
	2,4,5-Trichlorotoluene	2	54	74	64	50.000
26	Dehydroabietic Acid	6	62	131	106	100.000
	Isopimaric Acid	3	63	120	94	100.000
	Chlorodehydroabietic Acid	3	62	120	92	100.000
	Pimaric Acid	3	59	120	92	100.000
	Abietic Acid	3	63	115	88	100.000
	Neoabietic Acid	3	61	95	80	100.000
	Oleic Acid	3	56	107	80	100.000

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY TO REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.26 STRATHCONA PAPER COMPANY

ATG	PARAMETER	NOBS	RECOVERY (2) (%) MINIMUM	MAXIMUM	AVERAGE	SPIKE / RMDL
9	Chromium	2	106	110	108	13.750
	Zinc	2	98	110	104	55.000
	Aluminum	2	90	106	98	20.000
	Copper	2	86	100	93	27.500
16	Methylene chloride	2	29	952	491	3.731
	Dibromochloromethane	2	106	212	159	4.409
	1,1-Dichloroethane	2	65	238	152	6.438
	Chloroform	2	76	210	143	6.929
	1,2-Dichloroethane	2	71	173	122	6.688
	1,1-Dichloroethylene	2	74	149	112	1.732
	Bromodichloromethane	2	85	116	101	6.063
	Trichloroethylene	2	65	121	93	2.553
	Tetrachloroethylene	2	46	59	53	4.409
17	Toluene	2	109	137	123	9.700
	o-Xylene	2	74	117	96	9.700
	m-Xylene and p-Xylene	2	76	105	91	4.409
	Benzene	2	44	119	82	9.700
19	2-Methylnaphthalene	2	87	109	98	1.841
	Naphthalene	2	81	105	93	2.500
20	m-Cresol	2	105	125	115	7.279
	p-Cresol	2	58	92	75	7.929
	Phenol	2	51	76	64	10.313
	Pentachlorophenol	2	17	79	48	19.438
23	1,2,3-Trichlorobenzene	1	96	96	96	7.500
	1,2,4-Trichlorobenzene	1	84	84	84	7.500
	1,2,3,4-Tetrachlorobenzene	1	83	83	83	7.500
	Hexachlorocyclopentadiene	1	61	61	61	7.500
26	Dehydroabietic Acid	2	88	292	190	52.200

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

RANGE OF RECOVERIES AND RATIO OF SPIKED QUANTITY TO REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS (1) IN PROCESS EFFLUENT (cont'd)

Table 4.27 TRENT VALLEY DIVISION (PAPERBOARD INDUSTRIES CORP.)

ATG	PARAMETER	NOBS	RECOVERY (2) (%) MINIMUM	MAXIMUM	AVERAGE	SPIKE / RMDL
9	Zinc	2	98	210	154	55.000
	Chromium	2	114	120	117	13.750
	Aluminum	2	100	108	104	20.000
	Copper	2	98	100	99	27.500
16	Methylene chloride	2	109	794	452	3.731
	Chloroform	2	76	197	137	6.929
	1,2-Dichloroethane	2	71	181	126	6.063
	Bromodichloromethane	2	109	116	113	6.063
	1,1-Dichloroethane	2	1	209	105	216.813
	Dibromochloromethane	2	88	108	98	4.409
	1,1-Dichloroethylene	2	53	135	94	1.732
	Trichloroethylene	2	68	119	94	2.553
	Tetrachloroethylene	2	46	65	56	4.409
17	Toluene	2	118	133	126	9.700
	m-Xylene and p-Xylene	2	74	103	89	4.409
	Benzene	2	65	110	88	9.700
	o-Xylene	2	71	105	88	9.700
19	Naphthalene	2	100	143	122	2.500
	2-Methylnaphthalene	2	94	148	121	1.841
20	m-Cresol	2	82	129	106	7.279
	p-Cresol	2	58	83	71	7.929
	Phenol	2	53	65	59	10.313
	Pentachlorophenol	2	1	83	42	19.438
23	1,2,3,4-Tetrachlorobenzene	1	80	80	80	7.500
	1,2,4-Trichlorobenzene	1	77	77	77	7.500
	1,2,3-Trichlorobenzene	1	73	73	73	7.500
	Hexachlorocyclopentadiene	1	68	68	68	7.500
26	Dehydroabietic Acid	2	88	110	99	52.200

NOTE: (1) - Only those parameters for which travelling spikes were required are presented.

(2) - Recovery = Actual value divided by expected value X 100%

(3) - SPIKE/RMDL = Expected value of the spiked sample divided by Regulation Method Detection Limit

APPENDIX J

Absolute Value of the Difference Between Process Effluent Concentration and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit for Candidate Parameters in Process Effluent

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT

Table 5.1 ABITIBI-PRICE INC., IROQUOIS FALLS DIVISION

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1)		
		MINIMUM	MAXIMUM	AVERAGE
Abietic Acid	4	4.00	286.00	142.60
Isopimaric Acid	4	2.00	240.00	92.40
Dehydroabietic Acid	11	.00	240.00	73.60
DOC	11	.00	200.00	47.27
Neoabietic Acid	4	6.00	43.00	24.80
Levopimaric Acid	4	6.00	40.00	22.80
Pimaric Acid	4	3.20	46.00	22.20
Toluene	4	.06	75.52	19.56
BOD, 5 day, Total Demand	10	.20	33.60	8.36
Benzene	4	.00	17.80	7.71
Aluminum	4	.00	16.67	6.67
Methylene chloride	4	.00	19.38	6.07
Chloroform	4	1.30	8.14	6.04
Zinc	4	.10	10.90	4.50
Oleic Acid	4	.80	7.40	4.40
Chloromethane	4	.00	6.49	1.62
Specific conductance	11	.00	4.00	1.11
Total suspended solids	11	.00	1.60	1.02
1,2,4-Trichlorobenzene	4	.00	2.30	.60
Phenol	4	.00	1.76	.48
Styrene	4	.00	1.04	.39
Total Kjeldahl nitrogen	4	.00	.68	.32
p-Cresol	4	.00	1.16	.30
m-Cresol	4	.00	.93	.30
Total phosphorus	4	.00	.50	.22
Copper	4	.10	.40	.20
Camphene	4	.00	.26	.13
Ammonia plus Ammonium	4	.01	.35	.13
o-Xylene	4	.00	.34	.13
Pentachlorobenzene	4	.00	.30	.10
Nitrate+Nitrite	4	.04	.08	.06
1,2,3-Trichlorobenzene	4	.00	.00	.00
1,2-Dichloroethane	4	.00	.00	.00
2,4,5-Trichlorotoluene	4	.00	.00	.00
Benzo(g,h,i)perylene	2	.00	.00	.00
Benzo(k)fluoranthene	3	.00	.00	.00
Bromodichloromethane	4	.00	.00	.00
Chlorodehydroabietic Acid	4	.00	.00	.00
Dibenz(a,h)anthracene	2	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute Value of the difference in concentration divided by Regulation Method Detection Limit

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.2a ABITIBI-PRICE INC., FORT WILLIAM DIVISION
Control Point 0100

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Abietic Acid	3	154.00	255.00	189.60
Isopimaric Acid	3	36.00	200.00	112.00
Dehydroabietic Acid	8	.00	220.00	102.40
Levopimaric Acid	3	13.00	77.20	38.20
Neoabietic Acid	3	11.60	41.20	21.60
Pimaric Acid	3	15.00	28.00	20.40
DOC	7	.00	40.00	17.14
Chloroform	3	6.43	28.57	16.90
Oleic Acid	3	1.20	16.00	7.80
Methylene chloride	3	.00	17.08	5.69
Benzene	3	.00	10.82	3.61
Aluminum	3	.00	5.67	2.44
BOD, 5 day, Total Demand	9	.40	4.80	1.84
Specific conductance	9	.60	6.80	1.49
Bromodichloromethane	3	.00	4.14	1.38
Total phosphorus	3	.10	3.10	1.27
Phenol	3	.42	1.25	.94
Total Kjeldahl nitrogen	3	.20	1.42	.61
Chlorodehydroabietic Acid	3	.00	2.00	.60
Toluene	3	.00	1.40	.47
Total suspended solids	9	.00	.80	.38
Zinc	2	.30	.40	.35
Copper	2	.10	.50	.30
p-Cresol	3	.09	.34	.19
Styrene	3	.00	.50	.17
m-Cresol	3	.06	.15	.10
Camphene	3	.00	.11	.05
Ammonia plus Ammonium	3	.01	.09	.05
Octachlorodibenzo-p-dioxin	1	.03	.03	.03
o-Xylene	3	.00	.08	.03
Nitrate+Nitrite	3	.00	.03	.01
1,2,3-Trichlorobenzene	3	.00	.00	.00
1,2,4-Trichlorobenzene	3	.00	.00	.00
1,2-Dichloroethane	3	.00	.00	.00
2,4,5-Trichlorotoluene	3	.00	.00	.00
Benzo(g,h,i)perylene	2	.00	.00	.00
Benzo(k)fluoranthene	2	.00	.00	.00
Chloromethane	3	.00	.00	.00
Dibenz(a,h)anthracene	2	.00	.00	.00
Octachlorodibenzofuran	1	.00	.00	.00
Pentachlorobenzene	3	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute Value of the difference in concentration divided by Regulation Method Detection Limit

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.2b ABITIBI-PRICE INC., FORT WILLIAM DIVISION
Control Point 0200

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Specific conductance	6	.00	234.80	39.60
DOC	3	.00	60.00	33.33
Levopimaric Acid	1	32.00	32.00	32.00
BOD, 5 day, Total Demand	6	1.20	117.20	21.17
Total suspended solids	6	.20	25.60	4.57
Aluminum	1	4.33	4.33	4.33
Pimaric Acid	1	4.00	4.00	4.00
Phenol	1	2.92	2.92	2.92
Chloroform	2	.00	3.14	1.57
Total Kjeldahl nitrogen	1	1.40	1.40	1.40
Toluene	2	.00	2.00	1.00
Zinc	1	1.00	1.00	1.00
Total phosphorus	1	.40	.40	.40
m-Cresol	1	.21	.21	.21
Octachlorodibenzo-p-dioxin	1	.13	.13	.13
Ammonia plus Ammonium	1	.04	.04	.04
Nitrate+Nitrite	1	.00	.00	.00
1,2,3-Trichlorobenzene	1	.00	.00	.00
1,2,4-Trichlorobenzene	1	.00	.00	.00
1,2-Dichloroethane	2	.00	.00	.00
2,4,5-Trichlorotoluene	1	.00	.00	.00
Abietic Acid	1	.00	.00	.00
Benzene	2	.00	.00	.00
Benzo(g,h,i)perylene	1	.00	.00	.00
Benzo(k)fluoranthene	1	.00	.00	.00
Bromodichloromethane	2	.00	.00	.00
Camphene	1	.00	.00	.00
Chlorodehydroabietic Acid	1	.00	.00	.00
Chloromethane	2	.00	.00	.00
Dibenz(a,h)anthracene	1	.00	.00	.00
Isopimaric Acid	1	.00	.00	.00
Methylene chloride	2	.00	.00	.00
Neoabietic Acid	1	.00	.00	.00
Octachlorodibenzofuran	1	.00	.00	.00
Oleic Acid	1	.00	.00	.00
Pentachlorobenzene	1	.00	.00	.00
Styrene	2	.00	.00	.00
o-Xylene	2	.00	.00	.00
p-Cresol	1	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute Value of the difference in concentration divided by Regulation Method Detection Limit

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.3 ABITIBI-PRICE INC., PROVINCIAL PAPERS DIVISION

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Dehydroabietic Acid	11	2.00	78.00	25.20
DOC	11	.00	24.00	8.18
Neoabietic Acid	4	.00	23.80	6.40
Methylene chloride	4	.00	10.54	4.75
Oleic Acid	4	.00	14.00	3.60
Aluminum	4	1.00	6.67	3.58
Isopimaric Acid	4	.80	5.80	3.20
Chloroform	4	.29	5.57	2.05
Pimaric Acid	4	.00	4.20	2.00
Abietic Acid	4	.00	2.80	1.40
Specific conductance	11	.20	5.20	.96
Zinc	4	.30	2.00	.90
Levopimaric Acid	4	.00	3.40	.80
BOD, 5 day, Total Demand	11	.00	2.40	.73
Benzene	4	.00	1.40	.39
o-Xylene	4	.04	1.14	.34
Total suspended solids	11	.00	.80	.33
Styrene	4	.04	.66	.28
Copper	4	.00	.60	.23
Toluene	4	.00	.58	.15
Total Kjeldahl nitrogen	4	.06	.22	.12
Nitrate+Nitrite	4	.00	.12	.05
Octachlorodibenzo-p-dioxin	2	.00	.07	.03
Ammonia plus Ammonium	4	.02	.04	.03
Total phosphorus	4	.01	.08	.03
p-Cresol	4	.00	.06	.02
m-Cresol	4	.00	.06	.01
Phenol	4	.00	.04	.01
1,2,3-Trichlorobenzene	4	.00	.00	.00
1,2,4-Trichlorobenzene	4	.00	.00	.00
1,2-Dichloroethane	4	.00	.00	.00
2,4,5-Trichlorotoluene	4	.00	.00	.00
Benzo(g,h,i)perylene	3	.00	.00	.00
Benzo(k)fluoranthene	3	.00	.00	.00
Bromodichloromethane	4	.00	.00	.00
Camphene	4	.00	.00	.00
Chlorodehydroabietic Acid	4	.00	.00	.00
Chloromethane	4	.00	.00	.00
Dibenz(a,h)anthracene	3	.00	.00	.00
Octachlorodibenzofuran	2	.00	.00	.00
Pentachlorobenzene	4	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute Value of the difference in concentration divided by Regulation Method Detection Limit

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.4 ABITIBI-PRICE INC., THUNDER BAY DIVISION

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Octachlorodibenzo-p-dioxin	2	.17	416.67	208.40
Methylene chloride	4	.00	538.21	148.07
Dehydroabietic Acid	12	10.00	210.00	87.00
Abietic Acid	4	10.00	142.00	78.60
DOC	12	.00	160.00	46.67
Octachlorodibenzofuran	2	.00	87.00	43.50
Isopimaric Acid	4	20.00	39.00	29.80
Neoabietic Acid	4	3.80	21.40	14.40
Levopimaric Acid	4	2.60	18.60	11.00
Pimaric Acid	4	2.00	9.80	7.40
Oleic Acid	4	.20	10.40	4.60
Aluminum	4	.67	8.00	3.83
Benzene	4	.00	11.62	2.91
BOD, 5 day, Total Demand	12	.00	6.60	2.80
Specific conductance	12	1.00	12.20	2.77
o-Xylene	4	.00	3.82	.95
Toluene	4	.00	2.76	.95
Phenol	4	.21	1.76	.78
1,2,4-Trichlorobenzene	4	.00	2.80	.70
Zinc	4	.00	2.00	.68
Chloroform	4	.00	1.43	.65
Chlorodehydroabietic Acid	4	.00	1.20	.40
Total suspended solids	12	.00	1.40	.37
Styrene	4	.00	1.44	.36
Total phosphorus	4	.00	.60	.35
Bromodichloromethane	4	.00	.90	.22
p-Cresol	4	.00	.53	.22
Camphene	4	.00	.77	.21
Chloromethane	4	.00	.80	.20
m-Cresol	4	.00	.62	.19
Copper	2	.00	.20	.10
Nitrate+Nitrite	4	.03	.12	.06
Ammonia plus Ammonium	4	.00	.12	.04
Total Kjeldahl nitrogen	4	.00	.10	.02
1,2,3-Trichlorobenzene	4	.00	.00	.00
1,2-Dichloroethane	4	.00	.00	.00
2,4,5-Trichlorotoluene	4	.00	.00	.00
Benzo(g,h,i)perylene	3	.00	.00	.00
Benzo(k)fluoranthene	3	.00	.00	.00
Dibenz(a,h)anthracene	3	.00	.00	.00
Pentachlorobenzene	4	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute Value of the difference in concentration divided by Regulation Method Detection Limit

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.5 BEAVER WOOD FIBRE COMPANY

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1)		
		MINIMUM	MAXIMUM	AVERAGE
Dehydroabietic Acid	4	1.80	120.00	46.00
Abietic Acid	4	.00	86.60	29.60
Oleic Acid	4	.00	44.80	18.80
Isopimaric Acid	4	.20	60.00	16.20
DOC	12	.00	26.00	6.33
Levopimaric Acid	4	.00	22.00	5.60
Toluene	4	.40	15.80	4.88
Aluminum	4	.67	10.00	3.50
Methylene chloride	4	.00	10.62	3.24
Pimaric Acid	4	.00	11.20	3.20
Neoabietic Acid	4	.00	11.20	2.80
1,1-Dichloroethylene	4	.00	4.57	1.54
m-Xylene and p-Xylene	4	.03	2.73	1.14
Benzene	4	.00	2.40	1.05
BOD, 5 day, Total Demand	12	.00	1.80	1.00
Phenol	4	.37	1.87	.93
Total suspended solids	11	.00	2.00	.80
o-Xylene	4	.00	2.58	.65
Chlorodehydroabietic Acid	4	.00	1.20	.40
Chloroform	4	.00	1.57	.39
Total Kjeldahl nitrogen	4	.04	.92	.37
Specific conductance	12	.00	2.00	.33
Zinc	4	.00	.60	.20
Naphthalene	4	.00	.25	.13
Copper	4	.00	.20	.13
Total phosphorus	4	.02	.37	.12
1,2,4-Trichlorobenzene	4	.00	.20	.10
1,2-Dichloroethane	4	.00	.39	.10
m-Cresol	4	.00	.18	.09
Nitrate+Nitrite	4	.00	.16	.05
Trichloroethylene	4	.00	.15	.04
Chromium	4	.00	.10	.03
Ammonia plus Ammonium	4	.00	.07	.02
p-Cresol	4	.00	.06	.02
1,1-Dichloroethane	4	.00	.00	.00
1,2,3,4-Tetrachlorobenzene	4	.00	.00	.00
1,2,3-Trichlorobenzene	4	.00	.00	.00
2-Methylnaphthalene	4	.00	.00	.00
Bromodichloromethane	4	.00	.00	.00
Dibromochloromethane	4	.00	.00	.00
Hexachlorocyclopentadiene	4	.00	.00	.00
Pentachlorophenol	4	.00	.00	.00
Tetrachloroethylene	4	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute Value of the difference in concentration divided by Regulation Method Detection Limit

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.6 BOISE CASCADE CANADA LTD., FORT FRANCES

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Chloroform	4	.00	257.43	91.64
1,2,3-Trichlorobenzene	3	.00	251.40	86.70
2,4,5-Trichlorotoluene	4	4.80	137.00	73.10
Octachlorostyrene	4	.00	33.00	10.90
Adsorbable Organic Halide	13	1.00	38.00	9.96
Pentachlorobenzene	4	.00	21.80	8.10
Dehydroabietic Acid	12	.00	24.80	6.80
Hexachlorocyclopentadiene	3	.00	14.20	4.80
Hexachlorobenzene	3	.00	9.40	4.70
1,2,4,5-Tetrachlorobenzene	1	3.90	3.90	3.90
Total Kjeldahl nitrogen	6	2.30	6.60	3.80
Dichlorodehydroabietic Ac.	11	.60	10.20	3.60
Toluene	4	.00	6.80	3.10
Total TCDF	6	.00	8.80	2.87
1,2,3,4-Tetrachlorobenzene	4	.00	10.80	2.70
COD	12	.30	11.80	2.49
Specific conductance	12	.00	10.00	1.75
BOD, 5 day, Total Demand	13	.08	4.20	1.64
Chlorodehydroabietic Acid	2	1.20	1.40	1.40
Aluminum	4	.33	2.33	1.21
Isopimaric Acid	2	.40	2.00	1.20
2,4,6-Trichlorophenol	5	.00	3.08	1.08
Levopimaric Acid	2	1.00	1.20	1.00
Abietic Acid	3	.00	2.20	.80
Hexachloroethane	4	.00	3.20	.80
Oleic Acid	2	.00	1.80	.80
2,4-Dichlorophenol	5	.12	1.47	.67
Total suspended solids	12	.00	2.60	.67
Neoabietic Acid	3	.00	1.80	.60
Pimaric Acid	2	.20	.80	.60
m-Cresol	4	.00	1.47	.43
VSS	5	.10	.70	.42
2,3,5-Trichlorophenol	5	.00	1.15	.40
1,2,4-Trichlorobenzene	3	.00	1.20	.40
Sulphide	5	.00	.75	.40
o-Cresol	5	.00	.81	.39
Total phosphorus	4	.20	.60	.35
Zinc	4	.06	.80	.34
Camphene	5	.01	.86	.33
Hexachlorobutadiene	3	.20	.40	.30
Total PCDD	6	.00	1.80	.30
Thallium	4	.00	.50	.21
p-Cresol	4	.00	.29	.13
2,3,7,8 TCDD	6	.00	.65	.10
Total H6CDD	6	.00	.50	.10
Total TCDD	6	.00	.65	.10
Copper	4	.00	.20	.08
Octachlorodibenzo-p-dioxin	6	.00	.27	.07
Total PCDF	6	.00	.20	.07
Nitrate+Nitrite	5	.00	.20	.06
Nickel	4	.00	.11	.06
Mercury	5	.00	.20	.05
Ammonia plus Ammonium	6	.00	.20	.04
Chromium	4	.00	.08	.04

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.6 (cont'd) BOISE CASCADE CANADA LTD., FORT FRANCES

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Molybdenum	4	.00	.08	.04
Vanadium	4	.00	.05	.02
1,2,3,5-Tetrachlorobenzene	1	.00	.00	.00
1,2-Dichloroethane	4	.00	.00	.00
Acenaphthylene	5	.00	.00	.00
Benzene	4	.00	.00	.00
Benzo(g,h,i)perylene	5	.00	.00	.00
Benzo(k)fluoranthene	5	.00	.00	.00
Bromodichloromethane	4	.00	.00	.00
Chrysene	5	.00	.00	.00
Dibenz(a,h)anthracene	5	.00	.00	.00
Fluoranthene	5	.00	.00	.00
Methylene chloride	4	.00	.00	.00
Naphthalene	5	.00	.00	.00
Octachlorodibenzofuran	6	.00	.00	.00
Phenanthrene	5	.00	.00	.00
Phenol	5	.00	.00	.00
Pyrene	5	.00	.00	.00
Styrene	4	.00	.00	.00
Total H6CDF	6	.00	.00	.00
Total H7CDD	5	.00	.00	.00
Total H7CDF	6	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute Value of the difference in concentration divided by Regulation Method Detection Limit

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.7 BOISE CASCADE CANADA LTD., KENORA

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Isopimaric Acid	4	23.00	209.40	80.00
Dehydroabietic Acid	14	2.60	165.00	71.40
Levopimaric Acid	3	.00	148.40	56.40
Abietic Acid	4	.20	73.20	51.40
Oleic Acid	4	3.00	94.40	29.00
Neoabietic Acid	4	.00	74.40	28.60
2,4,5-Trichlorotoluene	2	4.00	52.80	28.40
Pimaric Acid	4	5.40	45.80	18.20
BOD, 5 day, Total Demand	13	.16	19.00	6.92
1,2,4-Trichlorobenzene	3	1.90	12.30	6.50
Chlorodehydroabietic Acid	5	.00	14.40	6.20
1,2,3-Trichlorobenzene	4	.60	14.80	5.70
Specific conductance	11	.00	6.00	3.29
COD	14	.00	4.20	1.57
Aluminum	6	.67	2.10	1.27
Total suspended solids	12	.00	6.00	.82
Pentachlorobenzene	4	.00	3.20	.80
Total Kjeldahl nitrogen	4	.00	2.00	.80
m-Cresol	5	.00	3.00	.69
p-Cresol	5	.00	2.89	.58
Phenol	5	.00	1.98	.55
Camphene	5	.00	1.94	.49
Octachlorodibenzo-p-dioxin	2	.20	.67	.43
Zinc	6	.00	.36	.17
Chloroform	4	.00	.29	.14
Ammonia plus Ammonium	4	.00	.14	.07
Copper	5	.00	.20	.06
Total phosphorus	4	.00	.20	.05
Nitrate+Nitrite	5	.00	.20	.04
1,2-Dichloroethane	4	.00	.00	.00
Benzene	4	.00	.00	.00
Benzo(g,h,i)perylene	5	.00	.00	.00
Benzo(k)fluoranthene	5	.00	.00	.00
Bromodichloromethane	4	.00	.00	.00
Chloromethane	3	.00	.00	.00
Dibenz(a,h)anthracene	5	.00	.00	.00
Methylene chloride	4	.00	.00	.00
Octachlorodibenzofuran	2	.00	.00	.00
Styrene	4	.00	.00	.00
Toluene	4	.00	.00	.00
o-Xylene	4	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute Value of the difference in concentration divided by Regulation Method Detection Limit

**ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN
PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE
CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT
FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)**

Table 5.8 CANADIAN PACIFIC FOREST PRODUCTS LTD., DRYDEN

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1)		
		MINIMUM	MAXIMUM	AVERAGE
2,4,5-Trichlorotoluene	3	13.80	80.00	36.10
Adsorbable Organic Halide	12	1.00	68.40	15.72
1,2,3,5-Tetrachlorobenzene	4	.00	28.70	12.90
1,2,3-Trichlorobenzene	3	.20	31.60	12.20
Chloroform	4	1.71	36.86	11.29
Specific conductance	13	.00	52.00	7.69
Oleic Acid	5	.00	16.20	6.00
Pentachlorobenzene	3	1.20	6.00	4.30
Abietic Acid	5	.00	5.40	2.20
Chlorodehydroabietic Acid	5	.40	8.00	2.00
Dehydroabietic Acid	18	.00	8.00	2.00
Isopimaric Acid	5	.00	6.60	2.00
Neoabietic Acid	5	.00	8.20	2.00
Octachlorostyrene	2	.00	3.10	1.60
Pimaric Acid	5	.00	4.80	1.60
Ammonia plus Ammonium	13	.00	7.78	1.47
Aluminum	17	.00	4.00	1.33
Zinc	17	.00	5.00	1.31
1,2,4,5-Tetrachlorobenzene	4	.00	2.70	1.30
Hexachlorobenzene	3	.00	4.00	1.30
Nitrate+Nitrite	11	.00	2.24	1.14
Total TCDF	4	.13	2.07	1.00
Total phosphorus	4	1.00	1.00	1.00
Toluene	3	.00	2.80	.93
Hexachlorocyclopentadiene	3	.00	2.60	.90
Dichlorodehydroabietic Ac.	14	.20	3.60	.80
2,3,5-Trichlorophenol	4	.00	1.85	.73
2,4,6-Trichlorophenol	4	.00	2.31	.58
Total Kjeldahl nitrogen	13	.00	3.36	.51
1,2,3,4-Tetrachlorobenzene	3	.00	1.60	.50
Hexachlorobutadiene	3	.00	1.40	.50
Total suspended solids	11	.08	1.28	.41
Sulphide	5	.00	.70	.40
Thallium	7	.00	.83	.31
COD	13	.00	2.00	.31
o-Cresol	4	.00	.96	.29
BOD, 5 day, Total Demand	12	.00	.60	.22
1,2,4-Trichlorobenzene	4	.00	.80	.20
Levopimaric Acid	5	.00	.60	.20
VSS	12	.00	.36	.16
Octachlorodibenzo-p-dioxin	4	.00	.57	.13
Molybdenum	7	.00	.25	.11
Hexachloroethane	4	.00	.30	.10
Octachlorodibenzofuran	4	.00	.40	.10
Vanadium	7	.00	.48	.10
Copper	7	.00	.19	.07
Nickel	7	.00	.45	.06
2,4-Dichlorophenol	4	.00	.18	.06
Mercury	6	.00	.05	.01
m-Cresol	4	.00	.01	.00
1,2-Dichloroethane	3	.00	.00	.00
2,3,7,8 TCDD	4	.00	.00	.00
Acenaphthylene	4	.00	.00	.00
Benzene	3	.00	.00	.00

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.8 (cont'd) CANADIAN PACIFIC FOREST PRODUCTS LTD., DRYDEN

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Benzo(g,h,i)perylene	4	.00	.00	.00
Benzo(k)fluoranthene	4	.00	.00	.00
Bromodichloromethane	3	.00	.00	.00
Camphene	4	.00	.00	.00
Chrysene	4	.00	.00	.00
Dibenz(a,h)anthracene	4	.00	.00	.00
Fluoranthene	4	.00	.00	.00
Methylene chloride	3	.00	.00	.00
Naphthalene	4	.00	.00	.00
Phenanthrene	4	.00	.00	.00
Phenol	4	.00	.00	.00
Pyrene	4	.00	.00	.00
Styrene	3	.00	.00	.00
Total H6CDD	4	.00	.00	.00
Total H6CDF	4	.00	.00	.00
Total H7C00	4	.00	.00	.00
Total H7CDF	4	.00	.00	.00
Total PCDD	4	.00	.00	.00
Total PCDF	4	.00	.00	.00
Total TCDD	3	.00	.00	.00
p-Cresol	3	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute Value of the difference in concentration divided by Regulation Method Detection Limit

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.9 CANADIAN PACIFIC FOREST PRODUCTS LTD., THUNDER BAY

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Chloroform	3	120.00	581.43	342.76
1,2,3,5-Tetrachlorobenzene	3	.00	431.60	143.90
1,2,4-Trichlorobenzene	3	.00	204.90	68.30
Dehydroabietic Acid	18	.60	194.60	49.00
1,2,3-Trichlorobenzene	3	2.20	113.50	42.90
Isopimaric Acid	4	21.00	85.40	39.80
Oleic Acid	4	7.00	47.00	28.00
Abietic Acid	4	1.60	23.20	17.20
Hexachlorobenzene	3	.00	40.40	16.80
Chlorodehydroabietic Acid	4	2.00	19.40	11.20
Pimaric Acid	4	4.20	18.80	9.60
Aluminum	13	.33	23.33	8.00
Adsorbable Organic Halide	10	1.00	19.40	7.46
2,4,5-Trichlorotoluene	3	.00	19.50	6.50
Neoabietic Acid	4	.00	9.00	4.60
COD	12	.00	22.50	4.28
1,2,4,5-Tetrachlorobenzene	3	.00	5.70	3.40
Dichlorodehydroabietic Ac.	17	.20	11.20	3.20
Levopimaric Acid	4	.00	6.40	2.80
Octachlorostyrene	3	.00	6.10	2.80
1,2,3,4-Tetrachlorobenzene	3	.00	7.00	2.30
Zinc	13	.00	5.40	2.14
Specific conductance	13	.00	15.80	2.06
BOD, 5 day, Total Demand	19	.00	5.40	1.93
Total TCDF	5	.00	4.67	1.87
Phenol	3	.42	3.10	1.83
Total suspended solids	12	.04	6.32	1.38
Total PCDF	5	.00	5.80	1.13
Sulphide	4	.00	2.00	1.05
Total Kjeldahl nitrogen	6	.00	1.80	.87
2,3,5-Trichlorophenol	3	.00	1.69	.74
m-Cresol	2	.00	1.47	.74
Hexachlorobutadiene	1	.70	.70	.70
2,4,6-Trichlorophenol	3	.00	1.54	.51
Octachlorodibenzo-p-dioxin	5	.00	.77	.43
Hexachlorocyclopentadiene	2	.00	.70	.40
2,4-Dichlorophenol	3	.06	.88	.39
Mercury	6	.00	1.55	.29
Toluene	3	.00	.80	.27
Total phosphorus	4	.00	.80	.25
Copper	4	.10	.30	.18
Hexachloroethane	3	.00	.20	.10
o-Cresol	3	.00	.27	.09
Thallium	4	.00	.17	.08
Chromium	4	.02	.10	.06
Ammonia plus Ammonium	6	.00	.32	.06
Vanadium	4	.00	.13	.04
Nickel	4	.00	.10	.03
Naphthalene	3	.00	.06	.02
Camphene	3	.00	.06	.02
Molybdenum	4	.00	.05	.02
1,2-Dichloroethane	3	.00	.00	.00
2,3,7,8 TCDD	5	.00	.00	.00
Acenaphthylene	3	.00	.00	.00

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.9 (cont'd) CANADIAN PACIFIC FOREST PRODUCTS LTD., THUNDER BAY

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Benzene	3	.00	.00	.00
Benzo(g,h,i)perylene	3	.00	.00	.00
Benzo(k)fluoranthene	3	.00	.00	.00
Bromodichloromethane	3	.00	.00	.00
Chrysene	3	.00	.00	.00
Dibenz(a,h)anthracene	3	.00	.00	.00
Fluoranthene	3	.00	.00	.00
Methylene chloride	3	.00	.00	.00
Nitrate+Nitrite	4	.00	.00	.00
Octachlorodibenzofuran	5	.00	.00	.00
Pentachlorobenzene	3	.00	.00	.00
Phenanthrene	3	.00	.00	.00
Pyrene	3	.00	.00	.00
Styrene	3	.00	.00	.00
Total H6CDD	5	.00	.00	.00
Total H6CDF	5	.00	.00	.00
Total H7CDD	5	.00	.00	.00
Total H7CDF	5	.00	.00	.00
Total PCDD	5	.00	.00	.00
Total TCDD	3	.00	.00	.00
p-Cresol	2	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute Value of the difference in concentration divided by Regulation Method Detection Limit

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.10 DOMTAR INC., FINE PAPERS DIVISION (CORNWALL)

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Phenol	4	1.67	121.00	37.15
Chloroform	4	4.29	34.29	16.07
Dehydroabietic Acid	12	.20	28.60	9.40
Abietic Acid	4	1.40	13.20	6.20
Oleic Acid	4	.40	14.60	4.40
Adsorbable Organic Halide	12	.00	8.00	3.50
Aluminum	4	1.00	6.67	2.92
Fluoranthene	2	2.00	2.50	2.25
Sulphide	4	.15	4.10	1.95
Phenanthrene	3	.75	3.25	1.83
Chlorodehydroabietic Acid	4	.40	4.00	1.60
Octachlorodibenzo-p-dioxin	3	.50	2.67	1.60
Specific conductance	12	.20	5.60	1.53
COD	12	.20	4.30	1.51
Pyrene	2	1.25	1.75	1.50
Toluene	3	.20	2.20	1.40
Benzene	4	.40	2.00	1.05
Total suspended solids	12	.00	2.20	.93
BOD, 5 day, Total Demand	12	.00	1.40	.85
Neoabietic Acid	4	.00	1.60	.80
Dichlorodehydroabietic Ac.	12	.00	3.80	.60
Nitrate+Nitrite	4	.00	2.24	.60
Styrene	1	.60	.60	.60
Ammonia plus Ammonium	4	.00	1.40	.40
Total Kjeldahl nitrogen	4	.06	.60	.26
Naphthalene	2	.19	.25	.22
Levopimaric Acid	2	.00	.40	.20
Chrysene	2	.00	.33	.17
1,2,4,5-Tetrachlorobenzene	4	.00	.20	.10
Total TCDF	3	.00	.07	.07
Zinc	4	.00	.20	.05
1,2,3,4-Tetrachlorobenzene	4	.00	.00	.00
1,2,3,5-Tetrachlorobenzene	4	.00	.00	.00
1,2,3-Trichlorobenzene	4	.00	.00	.00
1,2,4-Trichlorobenzene	4	.00	.00	.00
2,3,5-Trichlorophenol	1	.00	.00	.00
2,3,7,8 TCDD	4	.00	.00	.00
2,4,5-Trichlorotoluene	4	.00	.00	.00
2,4,6-Trichlorophenol	1	.00	.00	.00
2,4-Dichlorophenol	1	.00	.00	.00
Acenaphthylene	1	.00	.00	.00
Benzo(g,h,i)perylene	1	.00	.00	.00
Benzo(k)fluoranthene	1	.00	.00	.00
Camphene	1	.00	.00	.00
Chromium	4	.00	.00	.00
Copper	4	.00	.00	.00
Dibenz(a,h)anthracene	1	.00	.00	.00
Hexachlorobenzene	4	.00	.00	.00
Hexachlorobutadiene	4	.00	.10	.00
Hexachlorocyclopentadiene	4	.00	.00	.00
Hexachloroethane	4	.00	.00	.00
Isopimaric Acid	4	.00	.00	.00
Mercury	4	.00	.00	.00
Molybdenum	4	.00	.00	.00

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.10 (cont'd) DOMTAR INC., FINE PAPERS DIVISION (CORNWALL)

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Nickel	4	.00	.00	.00
Octachlorodibenzofuran	4	.00	.00	.00
Octachlorostyrene	4	.00	.00	.00
Pentachlorobenzene	4	.00	.00	.00
Pimaric Acid	4	.00	.20	.00
Thallium	4	.00	.00	.00
Total H6CDD	3	.00	.00	.00
Total H6CDF	3	.00	.00	.00
Total H7CDD	3	.00	.03	.00
Total H7CDF	4	.00	.00	.00
Total PCDD	4	.00	.00	.00
Total PCDF	3	.00	.00	.00
Total TCDD	4	.00	.00	.00
Total phosphorus	4	.00	.00	.00
Vanadium	4	.00	.00	.00
m-Cresol	1	.00	.00	.00
o-Cresol	1	.00	.00	.00
p-Cresol	1	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute Value of the difference in concentration divided by Regulation Method Detection Limit

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.11 DOMTAR INC., CONTAINERBOARD DIVISION (RED ROCK)

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Neoabietic Acid	3	11.00	140.00	61.60
Abietic Acid	3	11.40	64.00	29.80
Dehydroabietic Acid	9	1.40	65.60	24.80
Chloroform	3	5.71	22.86	14.29
Isopimaric Acid	3	4.40	10.60	6.80
Sulphide	3	.35	14.50	5.65
Pimaric Acid	3	.00	2.80	1.20
Adsorbable Organic Halide	10	.00	4.00	1.00
BOD, 5 day, Total Demand	12	.00	3.60	.82
Oleic Acid	3	.00	2.20	.80
Octachlorodibenzo-p-dioxin	3	.67	.67	.67
Aluminum	3	.33	1.00	.67
Chlorodehydroabietic Acid	3	.00	1.80	.60
1,2,4-Trichlorobenzene	3	.00	1.10	.40
Total Kjeldahl nitrogen	3	.20	.60	.33
Total suspended solids	12	.00	.80	.30
COD	12	.00	.80	.23
Specific conductance	12	.00	.60	.22
Ammonia plus Ammonium	3	.00	.40	.16
1,2,4,5-Tetrachlorobenzene	3	.00	.20	.10
Phenol	3	.00	.21	.10
2,4,6-Trichlorophenol	3	.00	.23	.08
Total phosphorus	3	.00	.20	.07
Nitrate+Nitrite	2	.04	.04	.04
1,2,3,4-Tetrachlorobenzene	3	.00	.00	.00
1,2,3,5-Tetrachlorobenzene	3	.00	.00	.00
1,2,3-Trichlorobenzene	3	.00	.00	.00
2,3,5-Trichlorophenol	3	.00	.00	.00
2,3,7,8 TCDD	4	.00	.00	.00
2,4,5-Trichlorotoluene	3	.00	.00	.00
2,4-Dichlorophenol	3	.00	.00	.00
Acenaphthylene	3	.00	.00	.00
Benzo(g,h,i)perylene	3	.00	.00	.00
Benzo(k)fluoranthene	3	.00	.00	.00
Camphene	3	.00	.00	.00
Chromium	3	.00	.00	.00
Chrysene	3	.00	.00	.00
Copper	3	.00	.00	.00
Dibenz(a,h)anthracene	3	.00	.00	.00
Dichlorodehydroabietic Ac.	9	.00	.40	.00
Fluoranthene	3	.00	.00	.00
Hexachlorobenzene	3	.00	.10	.00
Hexachlorobutadiene	3	.00	.00	.00
Hexachlorocyclopentadiene	3	.00	.00	.00
Hexachloroethane	3	.00	.00	.00
Mercury	3	.00	.00	.00
Molybdenum	3	.00	.00	.00
Naphthalene	3	.00	.00	.00
Nickel	3	.00	.00	.00
Octachlorodibenzofuran	4	.00	.00	.00
Octachlorostyrene	3	.00	.00	.00
Pentachlorobenzene	3	.00	.00	.00
Phenanthrene	3	.00	.00	.00
Pyrene	3	.00	.00	.00

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.11 (cont'd) DOMTAR INC., CONTAINERBOARD DIVISION (RED ROCK)

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Thallium	3	.00	.00	.00
Total H6CDD	4	.00	.00	.00
Total H6CDF	4	.00	.00	.00
Total H7CDD	4	.00	.00	.00
Total H7CDF	4	.00	.00	.00
Total PCDD	4	.00	.00	.00
Total PCDF	4	.00	.00	.00
Total TCDD	4	.00	.00	.00
Total TCDF	4	.00	.00	.00
Vanadium	3	.00	.00	.00
Zinc	3	.00	.00	.00
m-Cresol	3	.00	.00	.00
o-Cresol	3	.00	.00	.00
p-Cresol	3	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute Value of the difference in concentration divided by Regulation Method Detection Limit

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.12 DOMTAR INC., FINE PAPERS DIVISION (ST. CATHARINES)

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1)		
		MINIMUM	MAXIMUM	AVERAGE
Dehydroabietic Acid	4	26.00	52.00	34.60
COD	12	.00	96.00	10.18
Methylene chloride	4	.00	34.62	9.58
Abietic Acid	4	.00	23.20	8.80
Aluminum	4	6.67	11.67	8.67
Isopimaric Acid	4	1.20	4.40	2.80
Specific conductance	11	.00	20.00	2.10
Oleic Acid	4	.00	5.00	1.20
BOD, 5 day, Total Demand	12	.00	4.20	1.17
Chloroform	4	.00	4.29	1.11
Levopimaric Acid	4	.00	1.60	1.00
1,2,4-Trichlorobenzene	4	.00	3.60	.90
Total suspended solids	11	.00	2.00	.73
Benzene	4	.00	2.84	.71
Zinc	4	.00	1.10	.50
Copper	4	.00	1.00	.48
Toluene	4	.00	1.06	.46
Pimaric Acid	4	.00	1.40	.40
m-Xylene and p-Xylene	4	.00	.96	.35
Tetrachloroethylene	4	.00	1.00	.25
Chlorodehydroabietic Acid	4	.00	.80	.20
Phenol	4	.00	.50	.16
Bromodichloromethane	4	.00	.57	.15
o-Xylene	4	.02	.28	.14
Total Kjeldahl nitrogen	4	.00	.32	.10
Nitrate+Nitrite	4	.00	.20	.07
Total phosphorus	4	.02	.10	.06
Chromium	4	.00	.11	.05
Ammonia plus Ammonium	4	.01	.07	.03
Naphthalene	4	.00	.06	.02
1,1-Dichloroethane	4	.00	.00	.00
1,1-Dichloroethylene	4	.00	.00	.00
1,2,3,4-Tetrachlorobenzene	4	.00	.00	.00
1,2,3-Trichlorobenzene	4	.00	.00	.00
1,2-Dichloroethane	4	.00	.00	.00
2-Methylnaphthalene	4	.00	.00	.00
Dibromochloromethane	4	.00	.00	.00
Hexachlorocyclopentadiene	4	.00	.00	.00
Neoabietic Acid	4	.00	.00	.00
Pentachlorophenol	4	.00	.00	.00
Total H6CDF	2	.00	.00	.00
Total TCDF	2	.00	.00	.00
Trichloroethylene	4	.00	.00	.00
m-Cresol	4	.00	.00	.00
p-Cresol	4	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute Value of the difference in concentration divided by Regulation Method Detection Limit

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.13 DOMTAR INC., CONTAINERBOARD DIVISION (TRENTON)

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Dehydroabietic Acid	12	2.20	51.20	24.40
Neoabietic Acid	4	.00	66.80	23.80
Phenol	4	3.33	37.50	17.81
BOD, 5 day, Total Demand	9	.00	35.00	17.56
Abietic Acid	4	2.00	14.60	7.80
Pimaric Acid	4	1.40	10.00	5.80
COD	8	.00	18.60	4.55
Oleic Acid	4	.40	6.80	3.40
Isopimaric Acid	4	.40	7.00	3.00
Chloroform	1	1.86	1.86	1.86
Total suspended solids	8	.00	4.00	1.75
Specific conductance	8	.00	5.20	1.40
Total Kjeldahl nitrogen	4	.40	2.20	1.30
Aluminum	4	.00	2.67	1.25
Chlorodehydroabietic Acid	4	.00	1.40	.40
Cadmium	4	.00	1.00	.38
Copper	4	.00	1.00	.25
Total phosphorus	4	.00	1.00	.25
o-Cresol	4	.00	.46	.14
Nitrate+Nitrite	4	.04	.16	.10
Ammonia plus Ammonium	4	.00	.16	.04
Chromium	4	.00	.00	.00
Cobalt	4	.00	.00	.00
Lead	4	.00	.00	.00
Levopimaric Acid	1	.00	.00	.00
Molybdenum	4	.00	.00	.00
Nickel	4	.00	.00	.00
Thallium	4	.00	.00	.00
Vanadium	4	.00	.00	.00
Zinc	4	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute Value of the difference in concentration divided by Regulation Method Detection Limit

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.14 E.B. EDDY FOREST PRODUCTS LTD., ESPANOLA

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Sulphide	4	.00	44.05	11.45
Chloroform	5	.00	29.21	10.79
DOC	13	.00	94.00	10.65
Adsorbable Organic Halide	10	.00	32.40	7.60
Aluminum	6	.33	4.67	2.33
Benzene	5	.00	8.60	2.29
Bromodichloromethane	5	.00	11.39	2.28
Methylene chloride	4	.00	3.15	2.19
Dehydroabietic Acid	18	.00	23.40	2.00
Specific conductance	13	.00	20.00	1.54
2,4,6-Trichlorophenol	5	.15	1.69	1.02
Total TCDF	4	.00	2.47	.87
Zinc	5	.00	2.60	.82
Chlorodehydroabietic Acid	5	.00	3.60	.80
Isopimaric Acid	5	.00	3.80	.80
Total PCDF	5	.00	4.00	.80
Total suspended solids	13	.00	6.60	.77
Toluene	5	.00	2.28	.62
Total Kjeldahl nitrogen	4	.00	1.00	.33
Total phosphorus	4	.10	.60	.27
Vanadium	4	.00	.33	.23
Chromium	2	.20	.25	.23
Abietic Acid	5	.00	.80	.20
Dichlorodehydroabietic Ac.	17	.00	4.60	.20
Levopimaric Acid	5	.00	.60	.20
Nickel	5	.00	.70	.14
2,4-Dichlorophenol	5	.00	.37	.13
1,2-Dichloroethane	5	.00	.39	.08
Ammonia plus Ammonium	4	.00	.24	.08
Nitrate+Nitrite	4	.00	.20	.06
Styrene	5	.00	.20	.04
VSS	9	.00	.30	.03
BOD, 5 day, Total Demand	13	.00	.40	.03
Phenol	5	.00	.01	.00
1,2,3,4-Tetrachlorobenzene	5	.00	.00	.00
1,2,3,5-Tetrachlorobenzene	5	.00	.00	.00
1,2,3-Trichlorobenzene	5	.00	.00	.00
1,2,4,5-Tetrachlorobenzene	5	.00	.00	.00
1,2,4-Trichlorobenzene	5	.00	.00	.00
2,3,5-Trichlorophenol	5	.00	.00	.00
2,3,7,8 TCDD	5	.00	.00	.00
2,4,5-Trichlorotoluene	5	.00	.00	.00
Acenaphthylene	5	.00	.00	.00
Benzo(g,h,i)perylene	4	.00	.00	.00
Benzo(k)fluoranthene	5	.00	.00	.00
Camphene	5	.00	.00	.00
Chrysene	5	.00	.00	.00
Copper	3	.00	.00	.00
Dibenz(a,h)anthracene	4	.00	.00	.00
Fluoranthene	5	.00	.00	.00
Hexachlorobenzene	5	.00	.00	.00
Hexachlorobutadiene	5	.00	.00	.00
Hexachlorocyclopentadiene	5	.00	.00	.00
Hexachloroethane	5	.00	.00	.00

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.14 (cont'd) E.B. EDDY FOREST PRODUCTS LTD., ESPANOLA

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Mercury	5	.00	.00	.00
Molybdenum	2	.00	.00	.00
Naphthalene	5	.00	.00	.00
Neoabietic Acid	5	.00	.00	.00
Octachlorodibenzo-p-dioxin	5	.00	.00	.00
Octachlorodibenzofuran	5	.00	.00	.00
Octachlorostyrene	5	.00	.00	.00
Oleic Acid	5	.00	.00	.00
Pentachlorobenzene	5	.00	.00	.00
Phenanthrene	5	.00	.00	.00
Pimaric Acid	5	.00	.20	.00
Pyrene	5	.00	.00	.00
Thallium	2	.00	.00	.00
Total H6CDD	5	.00	.00	.00
Total H6CDF	5	.00	.00	.00
Total H7CDD	5	.00	.00	.00
Total H7CDF	4	.00	.00	.00
Total PCDD	5	.00	.00	.00
Total TCDD	4	.00	.00	.00
m-Cresol	5	.00	.00	.00
o-Cresol	5	.00	.00	.00
p-Cresol	5	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute Value of the difference in concentration divided by Regulation Method Detection Limit

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.15 E.B. EDDY FOREST PRODUCTS LTD., OTTAWA

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Dehydroabietic Acid	4	.00	104.20	54.40
Abietic Acid	4	.00	28.00	9.80
Aluminum	4	3.33	6.67	5.67
Levopimaric Acid	4	.00	14.00	5.20
Benzene	4	.00	7.62	2.63
COD	12	.50	3.20	2.03
BOD, 5 day, Total Demand	12	.20	3.60	1.62
Pimaric Acid	4	.00	4.80	1.60
Chloroform	4	.00	3.43	1.44
Specific conductance	12	.00	5.00	1.22
1,2,4-Trichlorobenzene	4	.00	3.00	1.20
Isopimaric Acid	4	.00	3.00	1.00
Naphthalene	4	.06	3.08	.86
Neoabietic Acid	4	.00	2.20	.60
Copper	4	.10	1.30	.58
1,2,3,4-Tetrachlorobenzene	4	.00	1.60	.50
Hexachlorocyclopentadiene	4	.00	1.90	.50
Zinc	4	.00	1.80	.48
Total phosphorus	4	.01	1.63	.43
m-Xylene and p-Xylene	4	.00	1.28	.33
Total Kjeldahl nitrogen	4	.02	.60	.26
o-Xylene	4	.00	.76	.23
1,1-Dichloroethylene	4	.00	.89	.22
Total suspended solids	11	.02	.44	.17
Methylene chloride	4	.00	.51	.13
Tetrachloroethylene	4	.00	.45	.11
m-Cresol	4	.00	.35	.10
1,2,3-Trichlorobenzene	4	.00	.30	.10
Phenol	4	.00	.12	.06
Nitrate+Nitrite	4	.00	.12	.05
Toluene	4	.00	.16	.04
Ammonia plus Ammonium	4	.00	.04	.03
Chromium	4	.00	.06	.02
2-Methylnaphthalene	4	.00	.03	.01
1,1-Dichloroethane	4	.00	.00	.00
1,2-Dichloroethane	4	.00	.00	.00
Bromodichloromethane	4	.00	.00	.00
Chlorodehydroabietic Acid	4	.00	.00	.00
Dibromochloromethane	4	.00	.00	.00
Octachlorodibenzo-p-dioxin	2	.00	.00	.00
Oleic Acid	4	.00	.00	.00
Pentachlorophenol	4	.00	.00	.00
Total H6CDF	2	.00	.00	.00
Total TCDF	2	.00	.00	.00
Trichloroethylene	4	.00	.00	.00
p-Cresol	4	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute Value of the difference in concentration divided by Regulation Method Detection Limit

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.16 JAMES RIVER-MARATHON LTD.

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Chloroform	4	.00	171.43	85.00
Adsorbable Organic Halide	12	4.80	192.60	48.44
Specific conductance	11	.00	90.00	16.36
Octachlorodibenzo-p-dioxin	4	.67	16.67	6.33
Sulphide	4	.00	22.50	6.00
Chlorodehydroabietic Acid	4	.60	13.20	4.40
Abietic Acid	4	.60	10.40	3.60
COD	11	.00	21.00	3.47
Total H7CDD	4	.00	11.67	3.43
Levopimaric Acid	4	.20	9.20	3.00
BOD, 5 day, Total Demand	10	.40	12.20	2.94
Oleic Acid	4	.20	5.60	2.60
Dehydroabietic Acid	11	.20	4.60	1.60
Ammonia plus Ammonium	4	.12	4.12	1.44
Total suspended solids	11	.00	6.60	1.25
Octachlorodibenzofuran	4	.00	3.17	1.13
Total H7CDF	4	.00	3.60	1.13
Dichlorodehydroabietic Ac.	12	.00	4.00	1.00
1,2,4-Trichlorobenzene	4	.00	3.00	.80
Pimaric Acid	4	.60	1.00	.80
Total TCDD	4	.45	1.35	.80
Total TCDF	4	.13	1.40	.80
Camphene	4	.00	1.63	.76
Total PCDF	4	.33	1.33	.73
Hexachlorocyclopentadiene	3	.00	2.00	.70
Nickel	3	.00	2.00	.67
Aluminum	3	.33	1.00	.56
Neoabietic Acid	4	.00	.60	.40
Total Kjeldahl nitrogen	4	.02	.82	.37
Phenol	4	.00	1.00	.28
Total PCDD	4	.10	.65	.25
Total phosphorus	4	.00	.70	.25
Isopimaric Acid	4	.00	1.00	.20
Total H6CDD	4	.00	.27	.10
Total H6CDF	4	.00	.25	.10
2,3,7,8 TCDD	4	.00	.15	.05
1,2,3,4-Tetrachlorobenzene	3	.00	.00	.00
1,2,3,5-Tetrachlorobenzene	4	.00	.00	.00
1,2,3-Trichlorobenzene	4	.00	.00	.00
1,2,4,5-Tetrachlorobenzene	3	.00	.00	.00
1,2-Dichloroethane	2	.00	.00	.00
2,3,5-Trichlorophenol	4	.00	.00	.00
2,4,5-Trichlorotoluene	3	.00	.00	.00
2,4,6-Trichlorophenol	4	.00	.00	.00
2,4-Dichlorophenol	4	.00	.00	.00
Acenaphthylene	4	.00	.00	.00
Benzene	2	.00	.00	.00
Benzo(g,h,i)perylene	4	.00	.00	.00
Benzo(k)fluoranthene	4	.00	.00	.00
Bromodichloromethane	2	.00	.00	.00
Chromium	3	.00	.00	.00
Chrysene	4	.00	.00	.00
Copper	3	.00	.00	.00
Dibenz(a,h)anthracene	4	.00	.00	.00

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.16 (cont'd) JAMES RIVER-MARATHON LTD.

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Fluoranthene	4	.00	.00	.00
Hexachlorobenzene	3	.00	.00	.00
Hexachlorobutadiene	4	.00	.00	.00
Hexachloroethane	4	.00	.00	.00
Mercury	2	.00	.00	.00
Methylene chloride	2	.00	.00	.00
Molybdenum	2	.00	.00	.00
Naphthalene	4	.00	.00	.00
Nitrate+Nitrite	4	.00	.00	.00
Octachlorostyrene	4	.00	.00	.00
Pentachlorobenzene	3	.00	.00	.00
Phenanthrene	4	.00	.00	.00
Pyrene	4	.00	.00	.00
Styrene	2	.00	.00	.00
Thallium	4	.00	.00	.00
Toluene	2	.00	.00	.00
Vanadium	2	.00	.00	.00
Zinc	3	.00	.00	.00
m-Cresol	4	.00	.00	.00
o-Cresol	4	.00	.00	.00
p-Cresol	4	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute Value of the difference in concentration divided by Regulation Method Detection Limit

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.17 KIMBERLY-CLARK CANADA INC., HUNTSVILLE

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Octachlorodibenzo-p-dioxin	2	.17	64.33	32.23
Specific conductance	4	.40	2.80	1.55
Oleic Acid	4	.00	3.40	.80
COD	6	.00	3.10	.72
Chloroform	5	.00	1.14	.40
Methylene chloride	3	.00	1.15	.38
Total phosphorus	4	.00	1.00	.27
Aluminum	5	.00	1.00	.27
Dehydroabietic Acid	4	.00	.80	.20
Total Kjeldahl nitrogen	4	.00	.60	.20
BOD, 5 day, Total Demand	6	.00	.14	.06
Nitrate+Nitrite	4	.00	.04	.01
1,1-Dichloroethane	3	.00	.00	.00
1,1-Dichloroethylene	3	.00	.00	.00
1,2,3,4-Tetrachlorobenzene	5	.00	.00	.00
1,2,3-Trichlorobenzene	5	.00	.00	.00
1,2,4-Trichlorobenzene	5	.00	.00	.00
1,2-Dichloroethane	3	.00	.00	.00
2-Methylnaphthalene	5	.00	.00	.00
Abietic Acid	4	.00	.00	.00
Ammonia plus Ammonium	4	.00	.00	.00
Benzene	3	.00	.00	.00
Bromodichloromethane	3	.00	.00	.00
Chlorodehydroabietic Acid	4	.00	.00	.00
Chromium	4	.00	.00	.00
Copper	4	.00	.00	.00
Dibromochloromethane	3	.00	.00	.00
Hexachlorocyclopentadiene	5	.00	.00	.00
Isopimaric Acid	4	.00	.00	.00
Levopimaric Acid	4	.00	.00	.00
Naphthalene	5	.00	.00	.00
Neoabietic Acid	4	.00	.00	.00
Pentachlorophenol	5	.00	.00	.00
Phenol	5	.00	.00	.00
Pimaric Acid	4	.00	.00	.00
Tetrachloroethylene	3	.00	.00	.00
Toluene	3	.00	.00	.00
Total H6CDF	2	.00	.00	.00
Total TCDF	2	.00	.00	.00
Total suspended solids	4	.00	.00	.00
Trichloroethylene	3	.00	.00	.00
Zinc	5	.00	.00	.00
m-Cresol	4	.00	.00	.00
m-Xylene and p-Xylene	3	.00	.00	.00
o-Xylene	3	.00	.00	.00
p-Cresol	4	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute Value of the difference in concentration divided by Regulation Method Detection Limit

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.18 KIMBERLY-CLARK CANADA INC., ST. CATHARINES

	NUMBER OF	DIFFERENCE RATIOS (1)		
PARAMETER	OBSERVATIONS	MINIMUM	MAXIMUM	AVERAGE
Dehydroabietic Acid	4	.00	200.00	51.00
Isopimaric Acid	4	.00	200.00	50.00
Specific conductance	9	.00	12.40	2.13
Phenol	4	.02	2.29	.76
Hexachlorocyclopentadiene	4	.00	2.60	.70
Nitrate+Nitrite	3	.00	2.00	.67
Total TCDF	2	.00	1.27	.67
Naphthalene	4	.04	1.99	.60
BOD, 5 day, Total Demand	11	.20	2.20	.60
Aluminum	4	.07	1.00	.52
Abietic Acid	4	.00	1.20	.40
Total Kjeldahl nitrogen	3	.00	1.00	.37
COD	11	.10	.60	.34
Total phosphorus	4	.00	.80	.27
Methylene chloride	4	.00	.73	.26
Tetrachloroethylene	4	.00	.73	.23
Chromium	4	.00	.90	.23
p-Cresol	4	.00	.69	.22
Toluene	4	.00	.44	.21
Pimaric Acid	4	.00	.20	.20
Zinc	4	.05	.25	.18
Copper	4	.06	.40	.18
Total suspended solids	7	.00	.60	.17
Trichloroethylene	4	.00	.37	.11
1,2,3-Trichlorobenzene	4	.00	.30	.10
1,2,4-Trichlorobenzene	4	.00	.40	.10
1,1-Dichloroethane	4	.04	.15	.08
m-Xylene and p-Xylene	4	.01	.15	.07
o-Xylene	4	.00	.08	.03
Chloroform	4	.00	.06	.02
Bromodichloromethane	4	.00	.02	.01
1,1-Dichloroethylene	4	.00	.00	.00
1,2,3,4-Tetrachlorobenzene	4	.00	.00	.00
1,2-Dichloroethane	4	.00	.00	.00
Ammonia plus Ammonium	3	.00	.00	.00
Benzene	4	.00	.00	.00
Chlorodehydroabietic Acid	4	.00	.20	.00
Dibromochloromethane	4	.00	.00	.00
Levopimaric Acid	4	.00	.00	.00
Neoabietic Acid	4	.00	.00	.00
Pentachlorophenol	4	.00	.00	.00
Total H6CDF	2	.00	.00	.00
m-Cresol	4	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute Value of the difference in concentration divided by Regulation Method Detection Limit

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.19 KIMBERLY-CLARK CANADA INC., TERRACE BAY

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Adsorbable Organic Halide	12	.00	22.30	9.24
Total TCDF	4	.67	15.33	5.67
COD	12	.00	23.00	4.68
Specific conductance	12	.00	10.00	2.00
Total TCDD	4	.00	5.00	1.65
1,2,4,5-Tetrachlorobenzene	4	.00	5.20	1.30
Chloroform	4	.29	2.00	1.11
Total Kjeldahl nitrogen	4	.60	1.60	.95
Octachlorodibenzo-p-dioxin	4	.00	2.00	.90
Dehydroabietic Acid	15	.00	8.40	.80
Total H6CDF	4	.00	2.90	.75
Total H7CDD	4	.00	1.50	.67
Aluminum	5	.00	1.33	.67
Sulphide	4	.00	2.00	.55
Total suspended solids	12	.00	1.20	.43
Zinc	5	.00	2.00	.40
Octachlorodibenzofuran	4	.00	.93	.23
Ammonia plus Ammonium	4	.00	.52	.21
Abietic Acid	3	.00	.80	.20
Oleic Acid	3	.00	.40	.20
Total PCDF	4	.00	.47	.20
Total H7CDF	4	.00	.67	.17
2,3,7,8 TCDD	4	.00	.50	.15
2,4-Dichlorophenol	4	.00	.29	.15
BOD, 5 day, Total Demand	11	.00	.44	.12
2,4,6-Trichlorophenol	4	.00	.23	.08
Nitrate+Nitrite	3	.04	.08	.05
Mercury	4	.00	.20	.05
Total phosphorus	4	.00	.20	.05
Total H6CDD	4	.00	.13	.03
VSS	3	.00	.10	.03
1,2,3,4-Tetrachlorobenzene	4	.00	.00	.00
1,2,3,5-Tetrachlorobenzene	4	.00	.00	.00
1,2,3-Trichlorobenzene	4	.00	.00	.00
1,2,4-Trichlorobenzene	4	.00	.00	.00
2,3,5-Trichlorophenol	4	.00	.00	.00
2,4,5-Trichlorotoluene	4	.00	.00	.00
Acenaphthylene	4	.00	.00	.00
Benzo(g,h,i)perylene	4	.00	.00	.00
Benzo(k)fluoranthene	4	.00	.00	.00
Camphene	4	.00	.00	.00
Chlorodehydroabietic Acid	3	.00	.00	.00
Chromium	4	.00	.00	.00
Chrysene	4	.00	.00	.00
Copper	4	.00	.00	.00
Dibenz(a,h)anthracene	4	.00	.00	.00
Dichlorodehydroabietic Ac.	15	.00	.80	.00
Fluoranthene	4	.00	.00	.00
Hexachlorobenzene	4	.00	.00	.00
Hexachlorobutadiene	4	.00	.00	.00
Hexachlorocyclopentadiene	4	.00	.00	.00
Hexachloroethane	4	.00	.00	.00
Isopimaric Acid	3	.00	.00	.00
Levopimaric Acid	3	.00	.00	.00

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.19 (cont'd) KIMBERLY-CLARK CANADA INC., TERRACE BAY

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Molybdenum	4	.00	.00	.00
Naphthalene	4	.00	.00	.00
Neoabietic Acid	3	.00	.20	.00
Nickel	4	.00	.00	.00
Octachlorostyrene	4	.00	.00	.00
Pentachlorobenzene	4	.00	.00	.00
Phenanthrene	4	.00	.00	.00
Phenol	4	.00	.00	.00
Pimaric Acid	3	.00	.00	.00
Pyrene	4	.00	.00	.00
Thallium	4	.00	.00	.00
Total PCDD	4	.00	.00	.00
Vanadium	4	.00	.00	.00
m-Cresol	4	.00	.00	.00
o-Cresol	4	.00	.00	.00
p-Cresol	4	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute Value of the difference in concentration divided by Regulation Method Detection Limit

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.20a MACMILLAN BLOEDEL LTD.
Control Point 1200

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Nitrate+Nitrite	3	.00	354.80	132.93
Levopimaric Acid	5	.00	70.80	26.20
Specific conductance	4	4.00	48.00	25.50
Oleic Acid	5	.00	61.20	21.00
Chlorodehydroabietic Acid	5	.00	35.00	15.40
Neoabietic Acid	5	.00	57.20	13.80
Isopimaric Acid	5	.00	42.00	12.40
Total suspended solids	4	.40	34.20	9.80
Dehydroabietic Acid	1	7.00	7.00	7.00
Pimaric Acid	5	.00	19.20	6.20
Chromium	5	.00	6.45	1.34
Vanadium	4	.67	1.67	1.33
Cadmium	6	.00	3.55	1.13
Abietic Acid	5	.00	5.20	1.00
Zinc	3	.30	2.00	1.00
Total phosphorus	2	.20	1.50	.85
Thallium	7	.00	2.67	.57
Lead	8	.00	1.67	.50
Nickel	4	.00	1.00	.50
Aluminum	3	.00	.67	.44
Molybdenum	5	.00	1.50	.40
Ammonia plus Ammonium	1	.36	.36	.36
Copper	2	.00	.30	.15
Cobalt	6	.00	.50	.08
Chloroform	1	.00	.00	.00
Phenol	1	.00	.00	.00
o-Cresol	1	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute Value of the difference in concentration divided by Regulation Method Detection Limit

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.20b MACMILLAN BLOEDEL LTD.
Control Point 1300

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Levopimaric Acid	11	.00	530.40	92.20
DOC	12	6.00	580.00	80.83
Isopimaric Acid	11	.00	348.20	70.60
Nitrate+Nitrite	8	10.36	111.40	47.64
Chlorodehydroabietic Acid	11	.00	207.60	29.80
Total Kjeldahl nitrogen	6	1.22	54.06	17.86
Oleic Acid	11	.00	123.20	17.00
BOD, 5 day, Total Demand	12	2.00	41.60	15.81
Pimaric Acid	11	.00	48.80	11.60
Neoabietic Acid	11	.00	83.80	9.40
Total suspended solids	12	.20	35.80	7.02
Abietic Acid	11	.00	29.20	6.20
Dehydroabietic Acid	11	.00	22.40	6.00
Specific conductance	12	.00	18.00	5.83
Total phosphorus	5	.70	2.69	1.74
VSS	4	.20	2.20	1.43
Cadmium	5	.25	3.50	1.28
Zinc	9	.00	6.00	1.26
Nickel	7	.00	5.45	1.11
Ammonia plus Ammonium	7	.00	4.36	1.06
Thallium	6	.00	2.00	1.00
Aluminum	9	.00	4.67	.81
Molybdenum	7	.00	1.00	.36
Vanadium	7	.00	1.33	.33
Copper	8	.00	.70	.28
Chromium	4	.00	.90	.23
Lead	7	.00	.50	.17
Cobalt	6	.00	1.00	.17
o-Cresol	4	.00	.58	.15
Chloroform	4	.00	.00	.00
Phenol	4	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute Value of the difference in concentration divided by Regulation Method Detection Limit

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.21 MALETTE KRAFT PULP AND POWER

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Chloroform	4	28.57	262.07	145.34
Isopimaric Acid	4	4.80	422.00	113.20
Abietic Acid	4	.00	300.00	79.00
Styrene	4	.00	221.24	55.65
Oleic Acid	4	.00	142.00	47.40
Neoabietic Acid	4	.00	120.60	32.40
Methylene chloride	4	.00	76.15	24.31
Pimaric Acid	4	.40	47.40	22.20
Total TCDF	2	3.47	35.47	19.47
Chlorodehydroabietic Acid	4	2.00	11.60	6.40
COD	12	.00	46.00	5.70
Benzene	4	.00	11.22	2.81
Levopimaric Acid	4	.00	11.00	2.80
2,4,6-Trichlorophenol	4	.00	7.61	2.75
Aluminum	4	.00	6.67	2.51
Toluene	4	.00	6.12	2.00
BOD, 5 day, Total Demand	12	.20	8.00	1.83
m-Cresol	4	.00	2.94	1.63
Total H7CDF	4	.00	6.33	1.57
2,4-Dichlorophenol	4	.00	3.14	1.54
Specific conductance	12	.00	14.00	1.50
Total H6CDF	4	.00	5.75	1.45
Sulphide	4	.50	2.65	1.40
Phenol	4	.06	2.12	1.28
Zinc	4	.00	2.20	1.05
1,2,4-Trichlorobenzene	4	.00	3.70	1.00
Camphene	4	.00	2.06	.80
Octachlorodibenzo-p-dioxin	4	.00	2.47	.63
Hexachlorocyclopentadiene	3	.00	1.20	.60
Total H7CDD	4	.00	1.17	.50
Total suspended solids	11	.00	1.40	.45
Mercury	3	.00	1.00	.41
2,4,5-Trichlorotoluene	4	.00	1.50	.40
Nitrate+Nitrite	4	.00	.92	.39
Copper	3	.00	.30	.20
Total Kjeldahl nitrogen	4	.12	.24	.20
Naphthalene	4	.00	.12	.07
o-Cresol	4	.00	.11	.06
Ammonia plus Ammonium	4	.00	.12	.06
p-Cresol	4	.00	.11	.06
Chromium	3	.00	.10	.05
Total phosphorus	4	.00	.10	.05
Nickel	3	.00	.05	.02
1,2,3,4-Tetrachlorobenzene	4	.00	.00	.00
1,2,3,5-Tetrachlorobenzene	4	.00	.00	.00
1,2,3-Trichlorobenzene	4	.00	.10	.00
1,2,4,5-Tetrachlorobenzene	4	.00	.00	.00
1,2-Dichloroethane	4	.00	.00	.00
2,3,5-Trichlorophenol	4	.00	.00	.00
2,3,7,8 TCDD	4	.00	.00	.00
Acenaphthylene	4	.00	.00	.00
Benzo(g,h,i)perylene	3	.00	.00	.00
Benzo(k)fluoranthene	4	.00	.00	.00
Bromodichloromethane	4	.00	.00	.00

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.21 (cont'd) MALETTE KRAFT PULP AND POWER

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Chrysene	4	.00	.00	.00
Dibenz(a,h)anthracene	3	.00	.00	.00
Fluoranthene	4	.00	.00	.00
Hexachlorobenzene	4	.00	.00	.00
Hexachlorobutadiene	4	.00	.00	.00
Hexachloroethane	4	.00	.00	.00
Molybdenum	2	.00	.00	.00
Octachlorodibenzofuran	4	.00	.00	.00
Octachlorostyrene	4	.00	.00	.00
Pentachlorobenzene	4	.00	.00	.00
Phenanthrene	4	.00	.00	.00
Pyrene	4	.00	.00	.00
Thallium	2	.00	.00	.00
Total H6CDD	4	.00	.00	.00
Total PCDD	3	.00	.00	.00
Total PCDF	3	.00	.00	.00
Total TCDD	2	.00	.00	.00
Vanadium	2	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute Value of the difference in concentration divided by Regulation Method Detection Limit

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.22 NORANDA FOREST INC., RECYCLED PAPERS

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Chloroform	3	.00	77.14	30.95
Hexachlorocyclopentadiene	3	3.70	41.30	17.10
DOC	10	.00	32.00	7.60
BOD, 5 day, Total Demand	11	.00	55.60	7.27
Octachlorodibenzo-p-dioxin	3	.17	4.00	2.17
Bromodichloromethane	3	1.00	1.12	1.08
Oleic Acid	3	.00	2.40	.80
Specific conductance	11	.00	2.00	.73
Zinc	3	.30	1.00	.57
Benzene	3	.00	1.40	.47
Aluminum	3	.00	1.33	.44
Total Kjeldahl nitrogen	3	.10	.90	.40
Phenol	3	.00	1.09	.36
Nitrate+Nitrite	3	.04	.84	.31
Total suspended solids	1	.24	.24	.24
m-Cresol	3	.00	.62	.23
1,2,4-Trichlorobenzene	3	.00	.30	.20
o-Xylene	3	.00	.50	.19
m-Xylene and p-Xylene	3	.00	.43	.17
Tetrachloroethylene	3	.00	.32	.11
1,1-Dichloroethylene	3	.00	.28	.09
Toluene	3	.00	.20	.08
VSS	1	.06	.06	.06
Total phosphorus	2	.05	.06	.06
Dibromochloromethane	3	.00	.09	.06
Chromium	3	.00	.10	.05
Copper	3	.00	.10	.03
Ammonia plus Ammonium	3	.01	.06	.03
Naphthalene	3	.00	.06	.02
p-Cresol	3	.00	.01	.00
1,1-Dichloroethane	3	.00	.00	.00
1,2,3,4-Tetrachlorobenzene	3	.00	.00	.00
1,2,3-Trichlorobenzene	3	.00	.10	.00
1,2-Dichloroethane	3	.00	.00	.00
2-Methylnaphthalene	3	.00	.00	.00
Abietic Acid	3	.00	.00	.00
Chlorodehydroabietic Acid	3	.00	.00	.00
Isopimaric Acid	3	.00	.00	.00
Levopimaric Acid	3	.00	.00	.00
Methylene chloride	3	.00	.00	.00
Neoabietic Acid	3	.00	.00	.00
Pentachlorophenol	3	.00	.00	.00
Pimaric Acid	3	.00	.00	.00
Total H6CDF	3	.00	.00	.00
Total TCDF	3	.00	.00	.00
Trichloroethylene	3	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute Value of the difference in concentration divided by Regulation Method Detection Limit

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.23 QUEBEC AND ONTARIO PAPER COMPANY LTD.

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Oleic Acid	2	.00	14.20	7.20
Methylene chloride	2	5.23	6.83	6.03
DOC	8	.00	8.00	2.30
Aluminum	3	.00	5.33	2.22
Isopimaric Acid	2	.00	2.80	1.40
Specific conductance	10	.00	4.00	1.16
Chlorodehydroabietic Acid	2	.00	1.60	.80
Zinc	3	.10	1.10	.73
Dehydroabietic Acid	7	.00	2.60	.60
Benzene	2	.00	1.20	.60
Total suspended solids	10	.20	1.20	.54
Toluene	2	.00	.80	.40
BOD, 5 day, Total Demand	8	.00	.60	.18
Copper	3	.00	.30	.17
Total Kjeldahl nitrogen	3	.14	.20	.17
VSS	11	.00	.50	.16
1,2,4-Trichlorobenzene	2	.00	.20	.10
Chloroform	2	.00	.06	.03
Total phosphorus	3	.00	.05	.02
Nitrate+Nitrite	3	.00	.04	.01
Ammonia plus Ammonium	3	.00	.02	.00
1,2,3-Trichlorobenzene	2	.00	.00	.00
1,2-Dichloroethane	2	.00	.00	.00
2,4,5-Trichlorotoluene	2	.00	.00	.00
Abietic Acid	2	.00	.00	.00
Benzo(g,h,i)perylene	2	.00	.00	.00
Benzo(k)fluoranthene	2	.00	.00	.00
Bromodichloromethane	2	.00	.00	.00
Camphene	2	.00	.00	.00
Chloromethane	2	.00	.00	.00
Dibenz(a,h)anthracene	2	.00	.00	.00
Levopimaric Acid	2	.00	.00	.00
Neoabietic Acid	2	.00	.00	.00
Pentachlorobenzene	2	.00	.00	.00
Phenol	2	.00	.00	.00
Pimaric Acid	2	.00	.00	.00
Styrene	2	.00	.00	.00
m-Cresol	2	.00	.00	.00
o-Xylene	2	.00	.00	.00
p-Cresol	2	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute Value of the difference in concentration divided by Regulation Method Detection Limit

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.24 ST. MARYS PAPER INC.

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Dehydroabietic Acid	11	20.00	194.00	82.00
Abietic Acid	3	26.00	44.00	34.00
Methylene chloride	4	7.22	98.46	31.70
Levopimaric Acid	3	21.20	36.00	28.40
Isopimaric Acid	3	4.00	28.00	20.00
Neoabietic Acid	3	11.60	26.60	18.00
Aluminum	3	.33	46.67	16.33
Pimaric Acid	3	2.80	10.00	7.20
BOD, 5 day, Total Demand	12	.00	23.20	3.75
Toluene	4	1.40	4.20	3.33
Specific conductance	12	.00	24.00	3.18
COD	13	.00	4.00	1.77
Total phosphorus	4	.30	3.10	1.72
Benzene	4	.00	2.78	1.43
Octachlorodibenzo-p-dioxin	2	1.00	1.67	1.33
Chloromethane	4	.00	4.30	1.14
Chlorodehydroabietic Acid	3	.00	2.80	1.00
Total suspended solids	12	.00	3.60	.82
1,2,4-Trichlorobenzene	4	.10	3.10	.80
Oleic Acid	3	.00	1.00	.60
Chloroform	4	.00	1.14	.39
Total Kjeldahl nitrogen	4	.04	.98	.36
p-Cresol	3	.00	.80	.33
m-Cresol	3	.00	.21	.13
Phenol	3	.00	.25	.11
1,2-Dichloroethane	4	.00	.39	.10
Styrene	4	.00	.30	.07
o-Xylene	4	.00	.28	.07
Ammonia plus Ammonium	4	.01	.08	.04
Copper	3	.00	.10	.03
Zinc	3	.00	.10	.03
Camphene	4	.00	.06	.01
Nitrate+Nitrite	4	.00	.04	.01
1,2,3-Trichlorobenzene	4	.00	.00	.00
2,4,5-Trichlorotoluene	4	.00	.00	.00
Benzo(g,h,i)perylene	3	.00	.00	.00
Benzo(k)fluoranthene	3	.00	.00	.00
Bromodichloromethane	4	.00	.00	.00
Dibenz(a,h)anthracene	3	.00	.00	.00
Octachlorodibenzofuran	2	.00	.00	.00
Pentachlorobenzene	4	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute Value of the difference in concentration divided by Regulation Method Detection Limit

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.25 SPRUCE FALLS POWER AND PAPER COMPANY LTD.

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Dehydroabietic Acid	12	.40	155.00	43.00
Neoabietic Acid	4	.60	64.80	19.40
Abietic Acid	4	2.20	25.40	13.80
COD	12	.00	40.00	11.67
Isopimaric Acid	4	1.00	13.00	6.00
BOD, 5 day, Total Demand	12	.00	16.00	5.73
Pimaric Acid	4	.20	7.60	2.80
Oleic Acid	4	1.20	3.40	2.40
Octachlorodibenzo-p-dioxin	2	1.00	1.33	1.17
Aluminum	4	.33	1.33	.83
Toluene	2	.40	1.20	.80
Copper	4	.00	2.00	.50
Total Kjeldahl nitrogen	4	.08	.60	.42
Camphene	4	.00	1.63	.41
Total suspended solids	12	.00	.60	.38
Total phosphorus	4	.00	1.00	.35
Chlorodehydroabietic Acid	4	.00	.80	.20
1,2,3-Trichlorobenzene	4	.00	.50	.10
Chloroform	2	.00	.14	.07
Nitrate+Nitrite	3	.00	.04	.03
Phenol	4	.00	.04	.02
1,2,4-Trichlorobenzene	4	.00	.00	.00
2,4,5-Trichlorotoluene	4	.00	.00	.00
Ammonia plus Ammonium	4	.00	.00	.00
Benzo(g,h,i)perylene	4	.00	.00	.00
Benzo(k)fluoranthene	4	.00	.00	.00
Dibenz(a,h)anthracene	4	.00	.00	.00
Octachlorodibenzofuran	2	.00	.00	.00
Pentachlorobenzene	4	.00	.00	.00
Zinc	4	.00	.00	.00
m-Cresol	3	.00	.00	.00
p-Cresol	3	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute Value of the difference in concentration divided by Regulation Method Detection Limit

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.26 STRATHCONA PAPER COMPANY

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Methylene chloride	4	.00	150.06	38.64
Oleic Acid	4	.00	22.00	11.00
Dehydroabietic Acid	4	2.60	26.20	10.80
Pimaric Acid	4	.00	27.80	9.60
Isopimaric Acid	4	.00	31.80	8.00
p-Cresol	4	.00	24.29	7.14
Levopimaric Acid	4	.00	26.40	6.60
Chloroform	4	.00	13.50	6.49
Neoabietic Acid	4	.00	14.80	4.40
Phenol	4	.00	7.08	3.12
Chlorodehydroabietic Acid	4	1.20	4.80	3.00
COD	12	.00	5.00	2.33
BOD, 5 day, Total Demand	12	.00	10.00	1.63
Total Kjeldahl nitrogen	4	.60	1.20	.95
m-Cresol	4	.00	1.74	.64
Specific conductance	11	.00	2.00	.64
Toluene	4	.00	1.46	.56
Aluminum	4	.00	1.33	.55
VSS	4	.10	.90	.50
Total suspended solids	11	.00	1.40	.45
Total phosphorus	4	.00	.60	.23
Pentachlorophenol	4	.00	.87	.22
Ammonia plus Ammonium	4	.00	.40	.20
Benzene	4	.00	.70	.17
Copper	4	.00	.20	.13
Zinc	4	.00	.30	.13
Chromium	4	.00	.11	.05
m-Xylene and p-Xylene	4	.00	.09	.02
Nitrate+Nitrite	4	.01	.03	.02
1,1-Dichloroethane	4	.00	.00	.00
1,1-Dichloroethylene	4	.00	.00	.00
1,2,3,4-Tetrachlorobenzene	4	.00	.00	.00
1,2,3-Trichlorobenzene	4	.00	.00	.00
1,2,4-Trichlorobenzene	4	.00	.10	.00
1,2-Dichloroethane	4	.00	.00	.00
2-Methylnaphthalene	4	.00	.00	.00
Abietic Acid	4	.00	.00	.00
Bromodichloromethane	4	.00	.00	.00
Dibromochloromethane	4	.00	.00	.00
Hexachlorocyclopentadiene	4	.00	.00	.00
Naphthalene	4	.00	.00	.00
Tetrachloroethylene	4	.00	.00	.00
Trichloroethylene	4	.00	.00	.00
o-Xylene	4	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute Value of the difference in concentration divided by Regulation Method Detection Limit

ABSOLUTE VALUE OF THE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT (cont'd)

Table 5.27 TRENT VALLEY DIVISION (PAPERBOARD INDUSTRIES CORP.)

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Dehydroabietic Acid	4	11.20	86.00	50.80
Aluminum	4	.00	36.67	15.50
1,1-Dichloroethane	5	.00	68.75	13.86
Phenol	4	.83	23.75	11.91
1,1-Dichloroethylene	5	.71	42.86	10.94
Levopimaric Acid	4	.00	16.60	8.00
Specific conductance	8	.00	52.00	7.90
Isopimaric Acid	4	1.20	10.40	6.00
Oleic Acid	4	.00	14.00	5.60
Abietic Acid	4	.00	7.00	4.00
Zinc	4	.00	12.40	3.30
BOD, 5 day, Total Demand	12	.00	14.00	3.10
Chlorodehydroabietic Acid	4	.00	6.40	2.40
Pimaric Acid	4	.00	4.60	2.40
COD	12	.20	8.90	2.23
m-Cresol	4	.21	7.09	2.18
Toluene	5	.00	3.40	1.36
Total suspended solids	12	.00	2.80	1.00
Methylene chloride	5	.00	4.00	.92
Benzene	5	.00	2.46	.72
Total Kjeldahl nitrogen	4	.00	2.20	.70
Chloroform	5	.00	1.47	.55
p-Cresol	4	.01	1.30	.47
Copper	4	.20	.50	.28
Pentachlorophenol	4	.00	.70	.23
1,2,4-Trichlorobenzene	4	.00	.70	.20
Total phosphorus	4	.10	.40	.19
Naphthalene	4	.00	.50	.16
Chromium	4	.05	.20	.11
o-Xylene	5	.00	.18	.04
Tetrachloroethylene	5	.00	.06	.03
m-Xylene and p-Xylene	5	.00	.11	.02
Nitrate+Nitrite	4	.00	.04	.02
Ammonia plus Ammonium	4	.00	.01	.00
1,2,3,4-Tetrachlorobenzene	4	.00	.00	.00
1,2,3-Trichlorobenzene	4	.00	.00	.00
1,2-Dichloroethane	5	.00	.00	.00
2-Methylnaphthalene	4	.00	.00	.00
Bromodichloromethane	5	.00	.00	.00
Dibromochloromethane	5	.00	.00	.00
Hexachlorocyclopentadiene	4	.00	.00	.00
Neoabietic Acid	4	.00	.00	.00
Trichloroethylene	5	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute Value of the difference in concentration divided by Regulation Method Detection Limit

APPENDIX K

Absolute Value of the Average Difference Between Process Effluent and Uncorrected Sample Concentration Divided by the Regulation Method Detection Limit for Candidate Parameters in Process Effluent

ABSOLUTE VALUE OF THE AVERAGE DIFFERENCE BETWEEN PROCESS EFFLUENT AND UNCORRECTED SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT

Table 6.1 ABITIBI-PRICE INC., IROQUOIS FALLS DIVISION

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Methylene chloride	11	.00	18.62	2.43
Benzene	11	.00	5.02	1.77
Toluene	11	.00	1.90	.43
Chloromethane	11	.00	1.35	.22
o-Xylene	11	.00	.58	.06
Chloroform	11	.00	.43	.05
Styrene	11	.00	.38	.05
Bromodichloromethane	11	.00	.28	.03
1,2-Dichloroethane	11	.00	.00	.00
Benzo(g,h,i)perylene	7	.00	.00	.00
Benzo(k)fluoranthene	9	.00	.00	.00
Camphene	10	.00	.00	.00
Dibenz(a,h)anthracene	7	.00	.00	.00

Table 6.2a ABITIBI-PRICE INC., FORT WILLIAM DIVISION
Control Point 0100

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Methylene chloride	11	.00	18.46	2.74
Benzene	11	.00	3.60	1.00
Toluene	11	.00	2.60	.87
Chloromethane	11	.00	1.42	.23
o-Xylene	11	.00	.76	.07
Styrene	11	.00	.38	.03
Bromodichloromethane	11	.00	.19	.02
Chloroform	11	.00	.14	.01
1,2-Dichloroethane	11	.00	.00	.00
Benzo(g,h,i)perylene	8	.00	.00	.00
Benzo(k)fluoranthene	9	.00	.00	.00
Camphene	10	.00	.00	.00
Dibenz(a,h)anthracene	8	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute value of the difference in concentration divided by Regulation method detection limit

ABSOLUTE VALUE OF THE AVERAGE DIFFERENCE BETWEEN PROCESS EFFLUENT AND UNCORRECTED SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT

Table 6.2b ABITIBI-PRICE INC., FORT WILLIAM DIVISION
Control Point 0200

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Methylene chloride	11	.00	18.92	3.11
Benzene	11	.00	4.02	.98
Toluene	11	.00	2.00	.55
Chloromethane	11	.00	1.35	.31
Camphene	10	.00	2.99	.30
Chloroform	11	.00	.43	.08
o-Xylene	11	.00	.76	.08
Styrene	11	.00	.38	.05
Bromodichloromethane	11	.00	.25	.02
1,2-Dichloroethane	11	.00	.00	.00
Benzo(g,h,i)perylene	8	.00	.00	.00
Benzo(k)fluoranthene	9	.00	.00	.00
Dibenz(a,h)anthracene	8	.00	.00	.00

Table 6.3 ABITIBI-PRICE INC., PROVINCIAL PAPERS DIVISION

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Methylene chloride	11	.00	3.69	1.13
Benzene	11	.00	2.00	.62
Toluene	11	.00	1.50	.36
Chloromethane	11	.00	.62	.10
o-Xylene	11	.00	.76	.09
Styrene	11	.00	.34	.06
Chloroform	11	.00	.43	.05
Bromodichloromethane	11	.00	.15	.01
1,2-Dichloroethane	11	.00	.00	.00
Benzo(g,h,i)perylene	8	.00	.00	.00
Benzo(k)fluoranthene	9	.00	.00	.00
Camphene	10	.00	.00	.00
Dibenz(a,h)anthracene	8	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute value of the difference in concentration divided by Regulation method detection limit

ABSOLUTE VALUE OF THE AVERAGE DIFFERENCE BETWEEN PROCESS EFFLUENT AND UNCORRECTED SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT

Table 6.4 ABITIBI-PRICE INC., THUNDER BAY DIVISION

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Methylene chloride	11	.00	5.62	1.33
Toluene	11	.00	2.06	.67
Chloroform	11	.00	6.93	.64
Benzene	11	.00	1.94	.47
Chloromethane	11	.00	1.35	.18
o-Xylene	11	.00	.20	.02
1,2-Dichloroethane	11	.00	.00	.00
Benzo(g,h,i)perylene	8	.00	.00	.00
Benzo(k)fluoranthene	9	.00	.00	.00
Bromodichloromethane	11	.00	.00	.00
Camphene	10	.00	.00	.00
Dibenz(a,h)anthracene	8	.00	.00	.00
Styrene	11	.00	.02	.00

Table 6.5 BEAVER WOOD FIBRE COMPANY

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Benzene	12	.00	2.52	.81
Toluene	12	.00	2.56	.61
Methylene chloride	12	.00	2.92	.60
1,1-Dichloroethane	12	.00	2.50	.21
m-Xylene and p-Xylene	12	.00	.59	.17
o-Xylene	12	.00	.76	.11
1,2-Dichloroethane	12	.00	.39	.10
1,1-Dichloroethylene	12	.00	.67	.06
Tetrachloroethylene	12	.00	.56	.05
Trichloroethylene	12	.00	.18	.01
2-Methylnaphthalene	11	.00	.00	.00
Bromodichloromethane	12	.00	.00	.00
Chloroform	12	.00	.00	.00
Dibromochloromethane	12	.00	.00	.00
Naphthalene	11	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute value of the difference in concentration divided by Regulation method detection limit

ABSOLUTE VALUE OF THE AVERAGE DIFFERENCE BETWEEN PROCESS EFFLUENT AND UNCORRECTED SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT

Table 6.6 BOISE CASCADE CANADA LTD., FORT FRANCES

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
1,2-Dichloroethane	12	.00	.00	.00
2,3,5-Trichlorophenol	1	.00	.00	.00
2,4,6-Trichlorophenol	1	.00	.00	.00
2,4-Dichlorophenol	1	.00	.00	.00
Acenaphthylene	12	.00	.00	.00
Benzene	12	.00	.00	.00
Benzo(g,h,i)perylene	11	.00	.00	.00
Benzo(k)fluoranthene	12	.00	.00	.00
Bromodichloromethane	12	.00	.00	.00
Camphene	12	.00	.00	.00
Chloroform	12	.00	.00	.00
Chrysene	12	.00	.00	.00
Dibenz(a,h)anthracene	11	.00	.00	.00
Fluoranthene	12	.00	.00	.00
Methylene chloride	12	.00	.00	.00
Naphthalene	12	.00	.00	.00
Phenanthrene	12	.00	.00	.00
Phenol	1	.00	.00	.00
Pyrene	12	.00	.00	.00
Styrene	12	.00	.00	.00
Toluene	12	.00	.00	.00
m-Cresol	1	.00	.00	.00
o-Cresol	1	.00	.00	.00
p-Cresol	1	.00	.00	.00

Table 6.7 BOISE CASCADE CANADA LTD., KENORA

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
1,2-Dichloroethane	11	.00	.00	.00
Benzene	11	.00	.00	.00
Benzo(g,h,i)perylene	12	.00	.00	.00
Benzo(k)fluoranthene	12	.00	.00	.00
Bromodichloromethane	11	.00	.00	.00
Camphene	12	.00	.00	.00
Chloroform	11	.00	.00	.00
Chloromethane	10	.00	.00	.00
Dibenz(a,h)anthracene	12	.00	.00	.00
Methylene chloride	11	.00	.00	.00
Phenol	1	.00	.00	.00
Styrene	11	.00	.00	.00
Toluene	11	.00	.00	.00
m-Cresol	1	.00	.00	.00
o-Xylene	11	.00	.00	.00
p-Cresol	1	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute value of the difference in concentration divided by Regulation method detection limit

ABSOLUTE VALUE OF THE AVERAGE DIFFERENCE BETWEEN PROCESS EFFLUENT AND UNCORRECTED SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT

Table 6.8 CANADIAN PACIFIC FOREST PRODUCTS LTD., DRYDEN

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Chloroform	10	.00	202.77	20.28
1,2-Dichloroethane	10	.00	.00	.00
2,3,5-Trichlorophenol	2	.00	.00	.00
2,4,6-Trichlorophenol	2	.00	.00	.00
2,4-Dichlorophenol	2	.00	.00	.00
Acenaphthylene	12	.00	.00	.00
Benzene	10	.00	.00	.00
Benzo(g,h,i)perylene	12	.00	.00	.00
Benzo(k)fluoranthene	12	.00	.00	.00
Bromodichloromethane	11	.00	.00	.00
Camphene	12	.00	.00	.00
Chrysene	12	.00	.00	.00
Dibenz(a,h)anthracene	12	.00	.00	.00
Fluoranthene	12	.00	.00	.00
Methylene chloride	10	.00	.00	.00
Naphthalene	12	.00	.00	.00
Phenanthrene	12	.00	.00	.00
Phenol	2	.00	.00	.00
Pyrene	12	.00	.00	.00
Styrene	10	.00	.00	.00
Toluene	10	.00	.00	.00
m-Cresol	2	.00	.00	.00
o-Cresol	2	.00	.00	.00
p-Cresol	2	.00	.00	.00

Table 6.9 CANADIAN PACIFIC FOREST PRODUCTS LTD., THUNDER BAY

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Bromodichloromethane	9	.00	.54	.06
Benzene	9	.00	.08	.01
Toluene	9	.00	.06	.01
1,2-Dichloroethane	9	.00	.03	.00
Acenaphthylene	10	.00	.00	.00
Benzo(g,h,i)perylene	10	.00	.00	.00
Benzo(k)fluoranthene	10	.00	.00	.00
Camphene	10	.00	.00	.00
Chloroform	9	.00	.00	.00
Chrysene	10	.00	.00	.00
Dibenz(a,h)anthracene	10	.00	.00	.00
Fluoranthene	10	.00	.00	.00
Methylene chloride	9	.00	.02	.00
Naphthalene	10	.00	.00	.00
Phenanthrene	10	.00	.00	.00
Pyrene	10	.00	.00	.00
Styrene	9	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute value of the difference in concentration divided by Regulation method detection limit

ABSOLUTE VALUE OF THE AVERAGE DIFFERENCE BETWEEN PROCESS EFFLUENT AND UNCORRECTED SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT

Table 6.10 DOMTAR INC., FINE PAPERS DIVISION (CORNWALL)

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Acenaphthylene	6	.00	.00	.00
Benzene	12	.00	.00	.00
Benzo(g,h,i)perylene	4	.00	.00	.00
Benzo(k)fluoranthene	4	.00	.00	.00
Bromodichloromethane	2	.00	.00	.00
Camphene	4	.00	.00	.00
Chloroform	12	.00	.00	.00
Chrysene	6	.00	.00	.00
Dibenz(a,h)anthracene	4	.00	.00	.00
Fluoranthene	8	.00	.00	.00
Naphthalene	6	.00	.00	.00
Phenanthrene	11	.00	.00	.00
Pyrene	7	.00	.00	.00
Styrene	5	.00	.00	.00
Toluene	10	.00	.00	.00

Table 6.11 DOMTAR INC., CONTAINERBOARD DIVISION (RED ROCK)

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Acenaphthylene	9	.00	.00	.00
Benzo(g,h,i)perylene	9	.00	.00	.00
Benzo(k)fluoranthene	9	.00	.00	.00
Camphene	9	.00	.00	.00
Chloroform	11	.00	.00	.00
Chrysene	9	.00	.00	.00
Dibenz(a,h)anthracene	9	.00	.00	.00
Fluoranthene	9	.00	.00	.00
Naphthalene	9	.00	.00	.00
Phenanthrene	9	.00	.00	.00
Pyrene	9	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute value of the difference in concentration divided by Regulation method detection limit

ABSOLUTE VALUE OF THE AVERAGE DIFFERENCE BETWEEN PROCESS EFFLUENT AND UNCORRECTED SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT

Table 6.12 DOMTAR INC., FINE PAPERS DIVISION (ST. CATHARINES)

	NUMBER OF	DIFFERENCE RATIOS (1)		
PARAMETER	OBSERVATIONS	MINIMUM	MAXIMUM	AVERAGE
Methylene chloride	12	.00	36.92	3.76
Benzene	12	.00	3.82	1.26
Toluene	12	.00	1.58	.46
m-Xylene and p-Xylene	7	.00	.68	.22
o-Xylene	12	.00	.82	.21
1,2-Dichloroethane	12	.00	.39	.06
Tetrachloroethylene	12	.00	.55	.05
Chloroform	12	.00	.43	.04
Bromodichloromethane	12	.00	.13	.01
1,1-Dichloroethane	12	.00	.00	.00
1,1-Dichloroethylene	12	.00	.00	.00
2-Methylnaphthalene	12	.00	.00	.00
Dibromochloromethane	7	.00	.00	.00
Naphthalene	12	.00	.02	.00
Trichloroethylene	12	.00	.00	.00

Table 6.13 DOMTAR INC., CONTAINERBOARD DIVISION (TRENTON)

	NUMBER OF	DIFFERENCE RATIOS (1)		
PARAMETER	OBSERVATIONS	MINIMUM	MAXIMUM	AVERAGE
Chloroform	7	.00	.00	.00

Table 6.14 E.B. EDDY FOREST PRODUCTS LTD., ESPANOLA

	NUMBER OF	DIFFERENCE RATIOS (1)		
PARAMETER	OBSERVATIONS	MINIMUM	MAXIMUM	AVERAGE
Benzene	10	.00	3.58	1.53
Methylene chloride	10	.00	1.54	.48
Toluene	10	.00	1.18	.42
Styrene	10	.00	1.80	.18
1,2-Dichloroethane	10	.00	.39	.04
Chloroform	10	.00	.43	.04
Acenaphthylene	12	.00	.00	.00
Benzo(g,h,i)perylene	10	.00	.00	.00
Benzo(k)fluoranthene	11	.00	.00	.00
Bromodichloromethane	10	.00	.00	.00
Camphene	12	.00	.00	.00
Chrysene	12	.00	.00	.00
Dehydroabietic Acid	2	.00	.00	.00
Dibenz(a,h)anthracene	10	.00	.00	.00
Dichlorodehydroabietic Ac.	2	.00	.00	.00
Fluoranthene	12	.00	.00	.00
Naphthalene	12	.00	.00	.00
Phenanthrene	12	.00	.00	.00
Pyrene	12	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute value of the difference in concentration divided by Regulation method detection limit

ABSOLUTE VALUE OF THE AVERAGE DIFFERENCE BETWEEN PROCESS EFFLUENT AND UNCORRECTED SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT

Table 6.15 E.B. EDDY FOREST PRODUCTS LTD., OTTAWA

	NUMBER OF	DIFFERENCE RATIOS (1)		
PARAMETER	OBSERVATIONS	MINIMUM	MAXIMUM	AVERAGE
Benzene	11	.00	3.40	1.14
Methylene chloride	11	.00	1.52	.48
Toluene	11	.00	1.32	.34
Chloroform	11	.00	1.53	.19
m-Xylene and p-Xylene	11	.00	1.15	.16
o-Xylene	11	.00	.88	.11
1,1-Dichloroethane	11	.00	.00	.00
1,1-Dichloroethylene	11	.00	.01	.00
2-Methylnaphthalene	10	.00	.00	.00
Bromodichloromethane	11	.00	.00	.00
Dibromochloromethane	11	.00	.00	.00
Naphthalene	10	.00	.00	.00
Tetrachloroethylene	11	.00	.00	.00
Trichloroethylene	11	.00	.00	.00

Table 6.16 JAMES RIVER-MARATHON LTD.

	NUMBER OF	DIFFERENCE RATIOS (1)		
PARAMETER	OBSERVATIONS	MINIMUM	MAXIMUM	AVERAGE
Toluene	6	.00	95.20	29.40
Chloroform	9	.00	142.86	23.81
Benzene	6	.00	71.60	21.20
Methylene chloride	6	.00	84.36	20.43
Fluoranthene	8	.00	1.25	.22
Benzo(g,h,i)perylene	8	.00	.43	.05
Benzo(k)fluoranthene	8	.00	.43	.05
Phenanthrene	8	.00	.25	.03
Pyrene	8	.00	.25	.03
Naphthalene	8	.00	.19	.02
Dibenz(a,h)anthracene	8	.00	.08	.01
1,2-Dichloroethane	6	.00	.01	.00
Acenaphthylene	8	.00	.00	.00
Bromodichloromethane	5	.00	.02	.00
Camphene	8	.00	.00	.00
Chrysene	8	.00	.00	.00
Styrene	6	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute value of the difference in concentration divided by Regulation method detection limit

ABSOLUTE VALUE OF THE AVERAGE DIFFERENCE BETWEEN PROCESS EFFLUENT AND UNCORRECTED SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT

Table 6.17 KIMBERLY-CLARK CANADA INC., HUNTSVILLE

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
1,1-Dichloroethane	3	.00	.00	.00
1,1-Dichloroethylene	3	.00	.00	.00
1,2-Dichloroethane	3	.00	.00	.00
2-Methylnaphthalene	6	.00	.00	.00
Benzene	3	.00	.00	.00
Bromodichloromethane	3	.00	.00	.00
Chloroform	6	.00	.00	.00
Dibromochloromethane	3	.00	.00	.00
Methylene chloride	3	.00	.00	.00
Naphthalene	6	.00	.00	.00
Tetrachloroethylene	3	.00	.00	.00
Toluene	3	.00	.00	.00
Trichloroethylene	3	.00	.00	.00
m-Xylene and p-Xylene	3	.00	.00	.00
o-Xylene	3	.00	.00	.00

Table 6.18 KIMBERLY-CLARK CANADA INC., ST. CATHARINES

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Methylene chloride	12	.00	.85	.23
Toluene	12	.00	1.20	.23
Chloroform	12	.00	.17	.08
Naphthalene	12	.00	.53	.04
1,1-Dichloroethane	12	.00	.00	.00
1,1-Dichloroethylene	12	.00	.00	.00
1,2-Dichloroethane	12	.00	.00	.00
Benzene	12	.00	.00	.00
Bromodichloromethane	12	.00	.00	.00
Dibromochloromethane	12	.00	.00	.00
Tetrachloroethylene	12	.00	.00	.00
Trichloroethylene	12	.00	.00	.00
m-Xylene and p-Xylene	12	.00	.00	.00
o-Xylene	12	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute value of the difference in concentration divided by Regulation method detection limit

ABSOLUTE VALUE OF THE AVERAGE DIFFERENCE BETWEEN PROCESS EFFLUENT AND UNCORRECTED SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT

Table 6.19 KIMBERLY-CLARK CANADA INC., TERRACE BAY

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Methylene chloride	1	.38	.38	.38
1,2-Dichloroethane	1	.00	.00	.00
Acenaphthylene	12	.00	.00	.00
Benzene	1	.00	.00	.00
Benzo(g,h,i)perylene	12	.00	.00	.00
Benzo(k)fluoranthene	12	.00	.00	.00
Bromodichloromethane	1	.00	.00	.00
Camphene	12	.00	.00	.00
Chloroform	12	.00	.00	.00
Chrysene	12	.00	.00	.00
Dibenz(a,h)anthracene	12	.00	.00	.00
Fluoranthene	12	.00	.00	.00
Naphthalene	12	.00	.00	.00
Phenanthrene	12	.00	.00	.00
Pyrene	12	.00	.00	.00
Styrene	1	.00	.00	.00
Toluene	2	.00	.00	.00

Table 6.20a MACMILLAN BLOEDEL LTD.
Control Point 1200

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Chloroform	12	.00	1.14	.29

Table 6.20b MACMILLAN BLOEDEL LTD.
Control Point 1300

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Chloroform	12	.00	.57	.24

NOTE: (1) - Difference Ratio = Absolute value of the difference in concentration divided by Regulation method detection limit

ABSOLUTE VALUE OF THE AVERAGE DIFFERENCE BETWEEN PROCESS EFFLUENT AND UNCORRECTED SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT

Table 6.21 MALETTE KRAFT PULP AND POWER

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Toluene	7	.00	2.60	.53
Benzene	7	.00	2.30	.51
Phenanthrene	11	.00	5.33	.48
1,2-Dichloroethane	7	.00	1.86	.27
Methylene chloride	7	.00	.42	.14
Pyrene	11	.00	1.10	.10
Styrene	7	.00	.38	.09
Fluoranthene	11	.00	.68	.06
Acenaphthylene	11	.00	.00	.00
Benzo(g,h,i)perylene	10	.00	.00	.00
Benzo(k)fluoranthene	11	.00	.00	.00
Bromodichloromethane	7	.00	.00	.00
Camphene	11	.00	.00	.00
Chloroform	7	.00	.00	.00
Chrysene	11	.00	.00	.00
Dibenz(a,h)anthracene	9	.00	.00	.00
Naphthalene	11	.00	.00	.00

Table 6.22 NORANDA FOREST INC., RECYCLED PAPERS

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Chloroform	9	.00	342.07	38.01
Benzene	9	.00	3.20	1.10
Methylene chloride	9	.00	2.92	.64
Toluene	9	.00	1.38	.32
o-Xylene	9	.00	.76	.18
m-Xylene and p-Xylene	9	.00	.59	.08
1,1-Dichloroethane	9	.00	.00	.00
1,1-Dichloroethylene	9	.00	.00	.00
1,2-Dichloroethane	9	.00	.00	.00
2-Methylnaphthalene	9	.00	.00	.00
Bromodichloromethane	9	.00	.00	.00
Dibromochloromethane	9	.00	.00	.00
Naphthalene	9	.00	.00	.00
Tetrachloroethylene	9	.00	.00	.00
Trichloroethylene	9	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute value of the difference in concentration divided by Regulation method detection limit

ABSOLUTE VALUE OF THE AVERAGE DIFFERENCE BETWEEN PROCESS EFFLUENT AND UNCORRECTED SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT

Table 6.23 QUEBEC AND ONTARIO PAPER COMPANY LTD.

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1)		
		MINIMUM	MAXIMUM	AVERAGE
Benzene	6	.00	2.14	.81
Chloromethane	6	.00	3.41	.76
Methylene chloride	6	.00	1.62	.57
Toluene	6	.00	1.60	.40
o-Xylene	6	.00	.53	.09
Styrene	6	.00	.38	.06
1,2-Dichloroethane	6	.00	.00	.00
Benzo(g,h,i)perylene	5	.00	.00	.00
Benzo(k)fluoranthene	5	.00	.00	.00
Bromodichloromethane	6	.00	.00	.00
Camphene	5	.00	.00	.00
Chloroform	6	.00	.00	.00
Dibenz(a,h)anthracene	5	.00	.00	.00

Table 6.24 ST. MARYS PAPER INC.

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1)		
		MINIMUM	MAXIMUM	AVERAGE
Benzene	12	.00	6.62	1.68
Methylene chloride	12	.00	9.35	1.50
Chloromethane	12	.00	3.24	.81
Toluene	12	.00	4.12	.80
Styrene	12	.00	8.72	.73
Chloroform	12	.00	.43	.08
o-Xylene	12	.00	.36	.06
1,2-Dichloroethane	12	.00	.39	.03
Benzo(g,h,i)perylene	9	.00	.00	.00
Benzo(k)fluoranthene	10	.00	.00	.00
Bromodichloromethane	12	.00	.00	.00
Camphene	11	.00	.00	.00
Dibenz(a,h)anthracene	9	.00	.00	.00

Table 6.25 SPRUCE FALLS POWER AND PAPER COMPANY LTD.

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1)		
		MINIMUM	MAXIMUM	AVERAGE
Benzo(g,h,i)perylene	12	.00	.00	.00
Benzo(k)fluoranthene	12	.00	.00	.00
Camphene	12	.00	.00	.00
Chloroform	9	.00	.00	.00
Dibenz(a,h)anthracene	12	.00	.00	.00
Toluene	8	.00	.00	.00

NOTE: (1) - Difference Ratio = Absolute value of the difference in concentration divided by Regulation method detection limit

ABSOLUTE VALUE OF THE AVERAGE DIFFERENCE BETWEEN PROCESS EFFLUENT AND UNCORRECTED SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS IN PROCESS EFFLUENT

Table 6.26 STRATHCONA PAPER COMPANY

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Benzene	12	.00	25.32	3.43
Methylene chloride	12	.00	2.54	.72
Toluene	12	.00	1.22	.45
m-Xylene and p-Xylene	11	.00	.55	.10
o-Xylene	12	.00	.54	.05
Trichloroethylene	12	.00	.31	.03
1,1-Dichloroethane	12	.00	.00	.00
1,1-Dichloroethylene	12	.00	.00	.00
1,2-Dichloroethane	12	.00	.00	.00
2-Methylnaphthalene	11	.00	.00	.00
Bromodichloromethane	12	.00	.00	.00
Chloroform	12	.00	.00	.00
Dibromochloromethane	11	.00	.00	.00
Naphthalene	11	.00	.00	.00
Tetrachloroethylene	12	.00	.00	.00

Table 6.27 TRENT VALLEY DIVISION (PAPERBOARD INDUSTRIES CORP.)

PARAMETER	NUMBER OF OBSERVATIONS	DIFFERENCE RATIOS (1) MINIMUM	MAXIMUM	AVERAGE
Benzene	7	.00	3.20	1.00
Tetrachloroethylene	7	.00	5.08	.73
Toluene	7	.00	2.16	.45
Methylene chloride	7	.00	2.22	.33
m-Xylene and p-Xylene	7	.00	.36	.05
o-Xylene	7	.00	.38	.05
1,1-Dichloroethane	7	.00	.00	.00
1,1-Dichloroethylene	7	.00	.00	.00
1,2-Dichloroethane	7	.00	.00	.00
2-Methylnaphthalene	11	.00	.00	.00
Bromodichloromethane	7	.00	.00	.00
Chloroform	7	.00	.00	.00
Dibromochloromethane	7	.00	.00	.00
Naphthalene	11	.00	.00	.00
Trichloroethylene	7	.00	.01	.00

NOTE: (1) - Difference Ratio = Absolute value of the difference in concentration divided by Regulation method detection limit

APPENDIX L

Average Process Effluent Concentration Ratios for Candidate Parameters Monitored Daily or Thrice-weekly by Subcategory

Table 7.1

AVERAGE PROCESS EFFLUENT CONCENTRATION RATIOS
FOR CANDIDATE PARAMETERS MONITORED DAILY OR THRICE-WEEKLY FOR MILLS IN THE
SULPHATE (KRAFT) SUBCATEGORY

ATG	PARAMETER	MILL Boise(Ft.F) RATIO CLASS	CP(Dryden) RATIO CLASS	CP(T.Bay) RATIO CLASS	Domtar(Cwl) RATIO CLASS	Domtar(RR) RATIO CLASS	Eddy(Esp) RATIO CLASS	James River RATIO CLASS	KC(Terr.B) RATIO CLASS	Malette RATIO CLASS
1	COD	74.6 FH	53.3 FH	97.5 FH	46.7 FH	42.3 FH	. .	77.1 FH	52.5 FH	60.6 FH
5a	DOC	. .	. .	. .	. .	. .	229.3 FH	. .	. .	. .
7	Specific conductance	323.1 FH	345.6 FH	313.1 FH	218.0 FH	135.4 FH	294.0 FH	431.8 FH	379.2 FH	326.9 FH
8	Total suspended solids	27.2 FH	11.2 FH	17.4 FH	15.1 FH	12.4 FH	5.0 FM	8.8 FH	8.5 FH	6.8 FH
26	Dehydroabietic Acid	80.4 FH	13.4 FH	357.8 FH	92.4 FH	228.4 FH	4.0 IH	9.8 FH	2.2 IM	112.0 FH
PP1	BOD, 5 day, Total Demand	23.8 FH	6.2 FH	55.4 FH	32.5 FH	31.6 FH	3.5 FM	40.1 FH	3.1 FM	31.2 FH
PP2	Adsorbable Organic Halide	491.2 FH	432.4 FH	478.1 FH	66.2 FH	35.5 FH	163.9 FH	899.5 FH	424.6 FH	454.6 FH
PP3	Dichlorodehydroabietic Ac.	28.4 FH	12.4 FH	12.4 FH	2.8 IH	3.6 IH	.8 IM	8.4 FM	1.6 IM	24.4 FH

LEGEND

FH - frequently found (high level)
FL - frequently found (low level)
FM - frequently found (medium level)
IH - infrequently found (high level)
IL - infrequently found (low level)
IM - infrequently found (medium level)
NO - nonoccurrence

Table 7.2

AVERAGE PROCESS EFFLUENT CONCENTRATION RATIOS
FOR CANDIDATE PARAMETERS MONITORED DAILY OR THRICE-WEEKLY FOR MILLS IN THE
SULPHITE-MECHANICAL SUBCATEGORY

		MILL AP (I.Falls)		AP (Ft. Will) 0100		AP (Ft. Will) 0200		AP(Prov.P)		AP (T.Bay)		Boise (Ken)		Q&O		St. Marys		Spruce Falls	
ATG	PARAMETER	RATIO	CLASS	RATIO	CLASS	RATIO	CLASS	RATIO	CLASS	RATIO	CLASS	RATIO	CLASS	RATIO	CLASS	RATIO	CLASS	RATIO	CLASS
1	COD	. .		. .		. .		. .		. .		195.3	FH	. .		61.1	FH	85.2	FH
5a	DOC	1477.2	FH	715.2	FH	1093.2	FH	123.1	FH	1214.8	FH	. .		58.7	FH	. .		. .	
7	Specific conductance	214.5	FH	181.7	FH	250.4	FH	68.4	FH	139.0	FH	194.1	FH	139.0	FH	56.9	FH	. .	
8	Total suspended solids	23.9	FH	6.2	FH	25.0	FH	6.7	FH	8.0	FH	13.2	FH	10.0	FH	33.6	FH	17.4	FH
26	Dehydroabietic Acid	824.2	FH	734.0	FH	1309.6	FH	92.0	FH	335.0	FH	858.2	FH	16.2	IM	428.4	FH	426.8	FH
PP1	BOD, 5 day, Total Demand	154.8	FH	88.4	FH	154.8	FH	18.0	FH	120.7	FH	130.2	FH	4.4	FM	39.5	FH	84.9	FH

LEGEND

FH - frequently found (high level)
FL - frequently found (low level)
FM - frequently found (medium level)
IH - infrequently found (high level)
IL - infrequently found (low level)
IM - infrequently found (medium level)
NO - nonoccurrence

Table 7.3

AVERAGE PROCESS EFFLUENT CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS MONITORED DAILY OR THRICE-WEEKLY FOR MILLS IN THE CORRUGATING SUBCATEGORY

		MILL Domtar(Tren)		Macmillan Bloedel			
				1200		1300	
ATG	PARAMETER	RATIO	CLASS	RATIO	CLASS	RATIO	CLASS
1	COD	297.8	FH	.	.	.	.
7	Specific conductance	219.3	FH	564.9	FH	336.1	FH
8	Total suspended solids	31.4	FH	19.6	FH	71.8	FH
26	Dehydroabietic Acid	233.8	FH	31.2	FH	43.8	FH
PP1	BOD, 5 day, Total Demand	255.7	FH	662.6	FH	296.5	FH

LEGEND

FH - frequently found (high level)
FL - frequently found (low level)
FM - frequently found (medium level)
IH - infrequently found (high level)
IL - infrequently found (low level)
IM - infrequently found (medium level)
NO - nonoccurrence

Table 7.4

AVERAGE PROCESS EFFLUENT CONCENTRATION RATIOS
FOR CANDIDATE PARAMETERS MONITORED DAILY OR THRICE-WEEKLY FOR MILLS IN THE
DEINKING-BOARD-FINE PAPERS-TISSUE SUBCATEGORY

ATG	PARAMETER	MILL Beaver Wood	Domtar(St.C)	Eddy(Ott)	KC(Hunts)	KC(St.C)	Noranda	Strathcona	Trent Valley
		RATIO CLASS	RATIO CLASS	RATIO CLASS	RATIO CLASS	RATIO CLASS	RATIO CLASS	RATIO CLASS	RATIO CLASS
1	COD	. .	83.5 FH	36.9 FH	8.0 FH	12.3 FH	. .	43.5 FH	92.5 FH
5a	DOC	136.9 FH	. .	. .	. .	. .	155.0 FH	. .	. .
7	Specific conductance	75.9 FH	78.2 FH	72.6 FH	98.5 FH	77.9 FH	184.8 FH	141.8 FH	166.6 FH
8	Total suspended solids	9.1 FH	7.5 FH	12.2 FH	1.1 IL	1.5 FL	14.3 FH	12.9 FH	27.7 FH
PP1	BOD, 5 day, Total Demand	24.6 FH	20.2 FH	31.3 FH	4.0 IL	7.6 FH	31.2 FH	21.3 FH	83.0 FH

LEGEND

FH - frequently found (high level)
FL - frequently found (low level)
FM - frequently found (medium level)
IH - infrequently found (high level)
IL - infrequently found (low level)
IM - infrequently found (medium level)
NO - nonoccurrence

APPENDIX M

Average Process Effluent Concentration Ratios for Candidate Parameters Monitored Weekly, Monthly, Bi-Monthly or Semi-Annually by Subcategory

Table 8.1

AVERAGE PROCESS EFFLUENT CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY OR SEMI-ANNUALLY FOR MILLS IN THE SULPHATE (KRAFT) SUBCATEGORY

ATG	PARAMETER	Boise(Ft.F) RATIO CLASS	CP(Dryden) RATIO CLASS	CP(T.Bay) RATIO CLASS	Domtar(Cwl) RATIO CLASS	Domtar(RR) RATIO CLASS	Eddy(Esp) RATIO CLASS	James River RATIO CLASS	KC(Terr.B) RATIO CLASS	Malette RATIO CLASS
4a	Ammonia plus Ammonium	NO	3.4 FM	NO	1.9 FL	1.6 FL	4.0 FM	9.9 FH	3.7 FM	3.0 FM
	Total Kjeldahl nitrogen	18.6 FH	4.0 FM	3.0 FM	6.6 FH	3.6 FM	7.0 FH	5.9 FH	9.3 FH	4.0 FM
4b	Nitrate+Nitrite	.6 IL	35.5 FH	NO	1.0 IM	.5 IL	NO	13.5 IM	11.9 IH	1.5 IM
6	Total phosphorus	18.2 FH	12.5 FH	6.6 FH	3.4 FM	2.3 FM	5.1 FM	5.9 FH	4.9 FH	3.9 FM
8	VSS	12.7 FH	5.3 FH	. .	. .	. .	1.6 FL	. .	3.9 FM	. .
9	Aluminum	37.8 FH	41.5 FH	159.4 FH	52.9 FH	99.3 FH	25.6 FH	9.0 FH	17.1 FH	110.7 FH
	Chromium	NO	. .	3.4 FM	1.0 IL	1.0 IL	.8 IL	.9 IL	7.4 FH	1.8 IM
	Copper	2.2 FM	.8 IL	2.3 FL	1.3 FL	NO	5.2 FL	2.7 FL	1.1 IL	.9 FL
	Molybdenum	.9 IL	1.0 FL	NO	NO	NO	NO	1.2 IM	NO	NO
	Nickel	NO	NO	NO	NO	NO	1.6 FL	1.5 FL	.7 IL	1.5 IH
	Thallium	.9 FL	.9 FL	NO	NO	NO	NO	NO	NO	NO
	Vanadium	NO	NO	NO	NO	NO	.7 IL	1.0 IL	NO	NO
	Zinc	16.7 FH	10.9 FH	16.2 FH	4.5 FM	3.9 FM	8.5 FH	6.8 FH	9.0 FH	11.9 FH
12	Mercury	NO	NO	NO	NO	NO	NO	4.9 FL	1.0 IL	.9 IL
15	Sulphide	11.9 FH	4.1 FM	6.3 FM	17.0 FH	20.4 FH	50.1 FH	60.5 FH	19.2 FL	88.3 FM
16	1,2-Dichloroethane	NO	NO	NO	. .	. .	.7 IL	NO	NO	1.0 FL
	Bromodichloromethane	1.2 FL	1.8 FL	1.2 FL	3.4 FM	. .	NO	NO	NO	NO
	Chloroform	1062.3 FH	177.9 FH	2172.8 FH	341.2 FH	190.9 FH	23.5 FH	1102.9 FH	17.1 FH	220.5 FH
	Methylene chloride	18.9 IM	NO	1.0 IL	. .	. .	11.6 FL	34.4 IH	NO	3.8 FL
17	Benzene	NO	NO	NO	20.9 FH	. .	5.4 FL	.8 IM	NO	7.7 IL
	Styrene	NO	NO	NO	8.2 FH	. .	NO	1.4 IH	NO	2.1 FM
	Toluene	26.6 FH	4.9 IH	2.0 IH	13.3 FH	. .	1.4 IM	3.0 IH	1.2 FL	4.8 FH
19	Acenaphthylene	NO	NO	NO	3.2 FM	NO	NO	NO	NO	NO
	Benzo(g,h,i)perylene	2.4 FM	2.3 FM	2.4 FM	NO	NO	NO	NO	NO	NO
	Benzo(k)fluoranthene	1.1 FL	1.1 FL	1.1 FL	1.2 IM	NO	NO	NO	NO	NO
	Camphene	4.3 FM	NO	1.1 IM	NO	NO	NO	.7 IL	NO	2.7 FL
	Chrysene	NO	NO	NO	4.8 FM	NO	NO	NO	NO	NO
	Dibenz(a,h)anthracene	1.1 FL	1.0 FL	1.1 FL	NO	NO	NO	NO	NO	NO
	Fluoranthene	NO	NO	NO	12.5 FH	NO	NO	NO	NO	NO
	Naphthalene	NO	NO	NO	4.9 FM	NO	NO	NO	NO	NO
	Phenanthrene	NO	NO	1.0 IL	29.6 FH	NO	NO	NO	NO	NO

Table 8.1 (cont'd)

AVERAGE PROCESS EFFLUENT CONCENTRATION RATIOS
FOR CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY OR SEMI-ANNUALLY
FOR MILLS IN THE SULPHATE (KRAFT) SUBCATEGORY

ATG	PARAMETER	Boise(Ft.F) RATIO CLASS	CP(Dryden) RATIO CLASS	CP(T.Bay) RATIO CLASS	Domtar(Cwl) RATIO CLASS	Domtar(RR) RATIO CLASS	Eddy(Esp) RATIO CLASS	James River RATIO CLASS	KC(Terr.B) RATIO CLASS	Malette RATIO CLASS
19	Pyrene	NO	NO	NO	7.5 FH	NO	NO	NO	NO	NO
20	2,3,5-Trichlorophenol	3.4 FM	7.9 FH	2.4 IM	NO	NO	NO	1.4 IM	NO	NO
	2,4,6-Trichlorophenol	5.3 FL	3.2 IH	4.1 FL	NO	2.2 FM	2.9 FM	NO	3.7 FM	3.5 FM
	2,4-Dichlorophenol	2.1 FM	2.2 FM	2.3 FM	NO	NO	.6 IL	NO	1.4 FL	1.7 FL
	Phenol	NO	NO	11.6 FH	43.1 FH	4.0 FM	NO	NO	NO	9.7 FH
	m-Cresol	1.0 IH	NO	3.0 IH	NO	NO	NO	NO	NO	7.0 FH
	o-Cresol	2.3 FM	NO	NO	1.3 FL	NO	NO	NO	NO	.6 IL
	p-Cresol	NO	NO	NO	NO	NO	NO	NO	NO	.8 IL
23	1,2,3,4-Tetrachlorobenzene	4.2 IH	1.9 IM	6.7 IH	NO	NO	NO	2.6 IM	NO	NO
	1,2,3,5-Tetrachlorobenzene	101.8 FH	31.2 IH	75.9 IH	NO	NO	NO	4.0 IH	NO	NO
	1,2,3-Trichlorobenzene	77.6 FH	73.6 FH	69.2 FH	NO	NO	NO	NO	NO	NO
	1,2,4,5-Tetrachlorobenzene	9.4 FH	5.7 FL	19.6 FL	NO	NO	NO	3.1 IM	1.2 IM	NO
	1,2,4-Trichlorobenzene	8.7 IH	6.7 IH	40.8 IH	NO	NO	NO	31.0 IH	NO	1.4 FL
	2,4,5-Trichlorotoluene	83.3 FH	41.3 FH	144.0 FH	NO	NO	NO	1.2 IH	NO	1.4 FL
	Hexachlorobenzene	10.6 FH	48.2 FL	48.7 FH	NO	NO	NO	170.3 IH	NO	NO
	Hexachlorobutadiene	2.3 IH	4.4 FM	4.7 FL	NO	NO	NO	.9 IM	NO	NO
	Hexachlorocyclopentadiene	6.1 FL	2.3 IM	2.9 IM	NO	NO	NO	3.2 IH	NO	.8 IL
	Hexachloroethane	3.0 IH	2.7 IH	4.3 FL	NO	NO	NO	NO	NO	NO
	Octachlorostyrene	3.0 FL	22.5 FH	5.5 FM	NO	NO	NO	NO	NO	NO
	Pentachlorobenzene	14.3 FL	14.7 FM	26.3 IH	NO	NO	NO	NO	NO	NO
24	2,3,7,8 TCDD	NO	NO	NO	NO	NO	NO	1.0 IM	1.5 FL	NO
	Octachlorodibenzo-p-dioxin	.9 IL	NO	4.5 IM	5.5 FM	11.0 FH	NO	14.0 FH	10.2 FM	1.0 IM
	Octachlorodibenzofuran	NO	NO	NO	NO	NO	NO	1.8 IH	1.6 FL	NO
	Total H6CDD	NO	NO	NO	NO	NO	NO	1.3 IM	1.6 FL	NO
	Total H6CDF	NO	NO	NO	NO	NO	NO	2.7 IH	NO	NO
	Total H7CDD	NO	NO	NO	1.1 IL	NO	NO	3.6 FL	NO	NO
	Total H7CDF	NO	NO	NO	NO	NO	NO	1.4 IH	1.2 FL	NO
	Total PCDD	NO	NO	NO	NO	NO	NO	1.3 FL	2.2 FM	2.0 IH
	Total PCDF	NO	NO	NO	NO	NO	NO	11.4 FM	2.5 FL	NO
	Total TCDD	NO	NO	NO	NO	NO	NO	2.2 FL	15.9 FH	NO
	Total TCDF	10.7 FH	4.1 FM	3.3 FL	2.7 FM	NO	2.4 FL	18.9 FH	21.1 FH	10.5 FH

Table 8.1 (cont'd)

AVERAGE PROCESS EFFLUENT CONCENTRATION RATIOS
FOR CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY OR SEMI-ANNUALLY
FOR MILLS IN THE SULPHATE (KRAFT) SUBCATEGORY

ATG	PARAMETER	Boise(Ft.F) RATIO CLASS	CP(Dryden) RATIO CLASS	CP(T.Bay) RATIO CLASS	Domtar(Cwl) RATIO CLASS	Domtar(RR) RATIO CLASS	Eddy(Esp) RATIO CLASS	James River RATIO CLASS	KC(Terr.B) RATIO CLASS	Malette RATIO CLASS
26	Abietic Acid	12.8 FL	4.6 FL	131.8 FH	38.0 FH	172.2 FH	NO	21.6 FH	3.8 FL	159.4 FH
	Chlorodehydroabietic Acid	19.6 FH	10.4 FH	61.8 FH	7.8 FH	2.8 IM	1.2 IM	39.8 FH	1.2 IL	19.8 FH
	Isopimaric Acid	35.2 FH	2.4 FL	162.4 FH	2.0 FL	46.8 FH	1.6 IH	9.8 FH	NO	88.4 FH
	Levopimaric Acid	4.2 FM	1.2 IL	9.2 FL	3.8 FL	. .	NO	10.0 FH	NO	63.2 FL
	Neoabietic Acid	4.0 FL	2.2 FL	34.0 FH	13.0 FH	258.4 FH	NO	11.0 FM	NO	74.2 FL
	Oleic Acid	37.0 FH	12.2 FM	53.4 FH	20.0 FH	13.6 FH	NO	22.6 FH	1.6 IM	18.2 IH
	Pimaric Acid	15.6 FH	1.8 FL	29.6 FH	1.4 FL	17.6 FH	1.0 IM	5.8 FM	1.0 IL	41.4 FH

LEGEND

FH - frequently found (high level)
FL - frequently found (low level)
FM - frequently found (medium level)
IH - infrequently found (high level)
IL - infrequently found (low level)
IM - infrequently found (medium level)
NO - nonoccurrence

Table 8.2

AVERAGE PROCESS EFFLUENT CONCENTRATION RATIOS
FOR CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY OR SEMI-ANNUALLY
FOR MILLS IN THE SULPHITE-MECHANICAL SUBCATEGORY

		AP (I.Falls)		AP (Ft. William)				AP(Prov.P)		AP (T.Bay)		Boise (Ken)		Q&O		St. Marys		Spruce falls	
				0100		0200													
ATG	PARAMETER	RATIO	CLASS	RATIO	CLASS	RATIO	CLASS	RATIO	CLASS	RATIO	CLASS	RATIO	CLASS	RATIO	CLASS	RATIO	CLASS	RATIO	CLASS
4a	Ammonia plus Ammonium		NO		NO	1.1	IL	.9	IL		NO		NO	7.3	FM		NO		NO
	Total Kjeldahl nitrogen	6.9	FH	5.5	FH	11.5	FH	2.2	FL	3.7	FM	4.1	FM	7.3	FH	2.4	FM	5.2	FM
4b	Nitrate+Nitrite	.9	IL		NO		NO	1.1	FL	.8	FL	.9	FL	1.3	FL		NO		NO
6	Total phosphorus	8.0	FH	3.7	FM	35.6	FH	.8	IL	2.4	FM	3.1	FM	4.3	FM	8.9	FH	2.8	FM
7	Specific conductance	. .		. .		. .		. .		. .		. .		. .		. .		61.4	FH
8	VSS	. .		. .		. .		. .		. .		. .		3.8	FM	. .		. .	
9	Aluminum	97.6	FH	14.3	FH	43.8	FH	60.6	FH	38.9	FH	11.1	FH	22.3	FH	79.9	FH	8.4	FH
	Copper	3.1	FM	4.0	FL	5.2	FL	3.6	IH	.7	IL	1.6	FL	2.3	FL	1.1	FL	2.3	FM
	Zinc	18.7	FH	4.6	FM	16.6	FH	3.4	FM	7.4	FH	5.7	FH	28.9	FH	5.7	FH	11.7	FH
16	1,2-Dichloroethane	.8	FL	.8	FL	.8	FL	.8	FL	.8	FL		NO	.9	FL	.8	IL	. .	
	Bromodichloromethane		NO		NO		NO		NO		NO	1.8	FL	.7	IM		NO	. .	
	Chloroform	25.4	FH	36.4	FH	8.2	FH	5.6	FH	3.9	FM	10.6	FH	2.1	FL	1.9	FL	5.7	FH
	Chloromethane	4.0	IH		NO	1.3	IH		NO	1.7	IM		NO	.9	IL	8.4	IM	. .	
	Methylene chloride	2.8	FM	4.8	FM	9.7	FM	5.8	FM	2.5	FL	1.0	IL	2.2	FL	18.8	FM	. .	
17	Benzene	3.6	FL	.9	IL	2.4	IM	2.5	FL	3.8	IH		NO	.8	IL	2.7	FM	. .	
	Styrene		NO		NO		NO	2.5	FL		NO		NO	.6	IL		NO	. .	
	Toluene	1.1	FL	14.2	FH	52.6	FH	1.0	FL	1.5	FL		NO	13.1	FL	5.6	FM	6.8	FH
	o-Xylene		NO		NO	.9	IL	4.4	IL		NO		NO		NO		NO	. .	
19	Benzo(g,h,i)perylene		NO		NO		NO		NO		NO	2.3	FM		NO		NO		NO
	Benzo(k)fluoranthene		NO		NO		NO		NO		NO	1.1	FL		NO		NO		NO
	Camphene	1.5	FL		NO	1.8	FL		NO		NO	1.3	IM		NO		NO		NO
	Dibenz(a,h)anthracene		NO		NO		NO		NO		NO	1.0	FL		NO		NO		NO
20	Phenol	1.2	FL	8.2	FH	26.1	FH		NO	1.5	FL		NO		NO	1.4	FL	.8	IL
	m-Cresol	.8	FL	1.4	FL	5.1	FH		NO	1.5	FL	.5	IL		NO	.7	IL		NO
	p-Cresol		NO	2.1	FL	24.4	FH		NO	2.6	IL		NO		NO	1.8	FL		NO
23	1,2,3-Trichlorobenzene		NO		NO		NO		NO		NO	9.1	FH		NO		NO		NO
	1,2,4-Trichlorobenzene		NO		NO		NO		NO		NO	6.6	FH	.6	IL		NO		NO
	2,4,5-Trichlorotoluene		NO		NO		NO		NO		NO	36.6	FH	.6	IL		NO		NO
	Pentachlorobenzene		NO		NO		NO		NO		NO	2.0	IM		NO		NO		NO
24	Octachlorodibenzo-p-dioxin	4.5	FL	3.2	FM	2.9	FM	1.0	IL	52.7	FL	5.7	FM		NO	5.4	FM	12.6	FH
	Octachlorodibenzofuran	2.9	FL		NO		NO		NO	11.7	IH	1.1	IM		NO	.8	IL	1.2	IL

Table 8.2 (cont'd)

AVERAGE PROCESS EFFLUENT CONCENTRATION RATIOS
FOR CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY OR SEMI-ANNUALLY
FOR MILLS IN THE SULPHITE-MECHANICAL SUBCATEGORY

		AP (I.Falls)		AP (Ft. Williams)				AP(Prov.P)		AP (T.Bay)		Boise (Ken)		Q&O		St. Marys		Spruce falls	
				0100		0200													
ATG	PARAMETER	RATIO	CLASS	RATIO	CLASS	RATIO	CLASS	RATIO	CLASS	RATIO	CLASS	RATIO	CLASS	RATIO	CLASS	RATIO	CLASS	RATIO	CLASS
26	Abietic Acid	480.8	FH	554.6	FH	809.0	FH	3.4	FL	302.2	FH	842.4	FH		NO	142.2	FH	275.6	FH
	Chlorodehydroabietic Acid	3.4	IH	2.0	IH	5.0	IH	1.0	IL	2.0	IM	27.0	FH	1.2	IM	1.4	IM	4.6	FL
	Isopimaric Acid	360.6	FH	512.2	FH	654.0	FH	8.2	FH	119.8	FH	1003.8	FH	1.2	IM	119.2	FH	93.4	FH
	Levopimaric Acid	42.8	FH	43.2	FH	337.6	FH		NO	31.4	FH	65.0	FL		NO	62.0	FH	. .	
	Neoabietic Acid	64.6	FH	54.6	FH	249.8	FH		NO	43.4	FH	187.4	FH		NO	59.2	FH	321.8	FH
	Oleic Acid	15.2	FH	18.2	FH	73.2	FH	10.8	IH	19.2	FH	203.6	FH	2.6	IH	12.0	FM	62.6	FH
	Pimaric Acid	64.0	FH	95.0	FH	201.0	FH	3.0	FL	28.8	FH	148.4	FH		NO	39.2	FH	17.2	FH

LEGEND

FH - frequently found (high level)
FL - frequently found (low level)
FM - frequently found (medium level)
IH - infrequently found (high level)
IL - infrequently found (low level)
IM - infrequently found (medium level)
NO - nonoccurrence

Table 8.3

AVERAGE PROCESS EFFLUENT CONCENTRATION RATIOS FOR CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY OR SEMI-ANNUALLY FOR MILLS IN THE CORRUGATING SUBCATEGORY

		Domtar(Tren)		Macmillan Bloedel			
				1200		1300	
ATG	PARAMETER	RATIO	CLASS	RATIO	CLASS	RATIO	CLASS
4a	Ammonia plus Ammonium	1.4	FL	23.2	FH	73.1	FH
	Total Kjeldahl nitrogen	15.8	FH	53.1	FH	131.9	FH
4b	Nitrate+Nitrite	2.5	FL	3251.9	FH	989.7	FH
6	Total phosphorus	11.4	FH	20.6	FH	80.7	FH
8	VSS	.	.	.	.	38.9	FH
9	Aluminum	102.5	FH	12.6	FH	54.0	FH
	Cadmium	1.8	FL	18.0	FH	8.5	FH
	Chromium	1.1	IL	1.5	IM	1.5	FL
	Cobalt		NO	2.2	FM	1.8	FL
	Copper	4.2	FM	4.3	FM	6.2	FH
	Lead		NO	2.4	FM	1.7	FL
	Molybdenum		NO	.9	IM	1.1	FL
	Nickel		NO	3.2	FM	3.3	FL
	Thallium		NO	1.7	FL	1.8	FL
	Vanadium		NO	2.3	FL	1.8	FL
	Zinc	17.0	FH	96.1	FH	81.9	FH
16	Chloroform	4.6	FM		NO		NO
20	Phenol	268.0	FH	17.9	IM	1.5	IH
	o-Cresol	2.7	FM		NO		NO
24	Octachlorodibenzo-p-dioxin	363.3	FH		NO		NO
	Octachlorodibenzofuran	26.5	FH		NO		NO
	Total H6CDD	9.8	FH		NO		NO
	Total H7CDD	36.7	FH		NO		NO
	Total H7CDF	10.7	FH		NO		NO
	Total TCDF	5.8	FM		NO		NO
26	Abietic Acid	122.6	FH	9.0	IH	6.0	FL
	Chlorodehydroabietic Acid	4.2	FM	29.8	FH	6.8	IH
	Isopimaric Acid	49.4	FH	121.4	FH	121.4	FH
	Levopimaric Acid	1.6	IM	45.0	FH	286.0	FH
	Neoabietic Acid	163.2	FH	15.8	FL	8.2	IM
	Oleic Acid	79.8	FH	165.4	FM	19.4	FH
	Pimaric Acid	25.6	FH	39.2	FH	28.8	FH

LEGEND

FH - frequently found (high level)
FL - frequently found (low level)
FM - frequently found (medium level)
IH - infrequently found (high level)
IL - infrequently found (low level)
IM - infrequently found (medium level)
NO - nonoccurrence

Table 8.4

AVERAGE PROCESS EFFLUENT CONCENTRATION RATIOS
FOR CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY OR SEMI-ANNUALLY
FOR MILLS IN THE DEINKING-BOARD-FINE PAPERS-TISSUE SUBCATEGORY

ATG	PARAMETER	Beaver Wood RATIO CLASS	Oomtar(St.C) RATIO CLASS	Eddy(Ott) RATIO CLASS	KC(Hunts) RATIO CLASS	KC(St.C) RATIO CLASS	Noranda RATIO CLASS	Strathcona RATIO CLASS	Trent Valley RATIO CLASS
4a	Ammonia plus Ammonium	NO	NO	.9 FL	NO	NO	.5 IL	9.6 FH	NO
	Total Kjeldahl nitrogen	4.4 FM	9.6 FM	7.2 FH	12.3 FH	4.3 FM	2.7 FM	23.0 FH	7.1 FH
4b	Nitrate+Nitrite	.6 IL	1.2 FL	1.1 FL	1.1 IM	NO	2.1 FM	NO	.4 IL
6	Total phosphorus	1.1 FL	NO	.9 IM	2.2 FM	2.6 FL	1.0 IL	5.1 FH	3.2 FM
8	VSS	. .	. .	. .	. .	. .	3.4 FM	6.3 FH	. .
9	Aluminum	25.8 FH	48.6 FH	99.3 FH	1.6 FL	3.9 FM	151.2 FH	27.2 FH	203.5 FH
	Chromium	NO	NO	NO	1.0 IL	NO	1.5 IH	NO	.7 IL
	Copper	1.0 IL	.8 IL	.9 FL	1.3 FL	.7 IL	1.3 FL	.7 IL	1.4 FL
	Zinc	2.9 FM	1.6 FL	2.2 FL	1.6 FL	97.3 FM	9.8 FH	2.0 FL	15.0 FH
16	1,1-Dichloroethane	.5 IL	NO	NO	NO	1.1 FL	NO	NO	11.0 FL
	1,1-Dichloroethylene	2.0 FL	NO	NO	NO	NO	NO	NO	161.3 FM
	1,2-Dichloroethane	.7 IL	.7 IL	1.3 FL	NO	NO	.8 FL	.8 FL	3.7 FL
	Bromodichloromethane	NO	.7 IL	NO	NO	NO	7.4 FH	NO	NO
	Chloroform	1.4 IM	2.6 FL	5.2 FM	5.1 FM	.7 IM	144.8 FH	3.4 FL	1.6 IM
	Dibromochloromethane	NO	NO	NO	NO	NO	1.2 FL	NO	NO
	Methylene chloride	1.5 IM	8.6 FL	1.5 IH	2.7 IH	1.7 FL	NO	32.9 FL	13.5 IH
	Tetrachloroethylene	NO	NO	NO	NO	1.5 FL	NO	NO	NO
	Trichloroethylene	NO	NO	NO	NO	2.8 FL	NO	NO	NO
17	Benzene	1.5 IH	2.7 IH	1.9 IH	NO	NO	4.4 FL	.9 IM	1.9 IH
	Toluene	10.0 FH	1.0 IL	1.1 IM	NO	3.7 FM	.9 IM	2.7 FL	4.6 FM
	m-Xylene and p-Xylene	.9 FL	.6 IL	.6 IL	NO	.8 IL	1.7 FL	NO	NO
	o-Xylene	.9 IL	.7 IL	.7 IL	NO	NO	2.7 FL	NO	NO
19	2-Methylnaphthalene	NO	NO	NO	NO	1.7 FL	NO	NO	NO
	Naphthalene	NO	NO	1.2 FL	NO	2.7 FL	NO	NO	.7 IL
20	Pentachlorophenol	.4 IL	NO	NO	NO	NO	NO	NO	.7 IL
	Phenol	3.5 FM	NO	.6 IL	NO	1.6 FL	NO	3.2 FL	24.7 FH
	m-Cresol	.5 IL	NO	NO	NO	NO	.5 IL	.9 FL	3.9 FM
	p-Cresol	NO	NO	NO	NO	.4 IL	NO	4.7 FL	.7 IL
23	1,2,3,4-Tetrachlorobenzene	NO	NO	.8 IL	NO	NO	NO	NO	NO
	1,2,3-Trichlorobenzene	NO	NO	.7 IL	NO	NO	NO	NO	NO
	1,2,4-Trichlorobenzene	NO	NO	2.3 FL	NO	NO	NO	NO	NO
	Hexachlorocyclopentadiene	NO	NO	NO	NO	9.1 IH	17.3 FH	NO	NO

Table 8.4 (cont'd)

AVERAGE PROCESS EFFLUENT CONCENTRATION RATIOS
FOR CANDIDATE PARAMETERS MONITORED WEEKLY, MONTHLY, BI-MONTHLY OR SEMI-ANNUALLY
FOR MILLS IN THE DEINKING-BOARD-FINE PAPERS-TISSUE SUBCATEGORY

ATG	PARAMETER	Beaver Wood RATIO CLASS	Domtar(St.C) RATIO CLASS	Eddy(Ott) RATIO CLASS	KC(Hunts) RATIO CLASS	KC(St.C) RATIO CLASS	Noranda RATIO CLASS	Strathcona RATIO CLASS	Trent Valley RATIO CLASS
24	Octachlorodibenzo-p-dioxin	2.3 FL	2171.5 FM	1.1 IM	6.7 FM	. .	3.1 FL	NO	.9 FL
	Total H6CDF	750.0 FH	1.1 FL	NO	NO	NO	3.5 IH	NO	375.4 FL
26	Abietic Acid	21.4 FH	28.8 FH	8.6 FL	NO	5.2 FL	NO	1.0 IH	10.4 FM
	Chlorodehydroabietic Acid	1.2 IM	3.4 FL	NO	NO	NO	2.0 IH	NO	1.8 IM
	Dehydroabietic Acid	144.8 FH	198.6 FH	83.6 FH	1.2 IM	316.0 FH	64.6 FH	48.4 FH	129.6 FH
	Isopimaric Acid	27.4 FH	12.2 FH	1.6 IM	NO	119.8 FL	NO	2.2 IH	8.4 FH
	Levopimaric Acid	12.6 FL	13.6 FM	7.2 IH	NO	2.0 IH	NO	NO	7.2 IH
	Neoabietic Acid	4.2 IM	NO	NO	NO	NO	NO	1.2 IM	1.8 IH
	Oleic Acid	15.2 FL	11.8 IH	1.8 IH	1.6 IM	296.2 FH	1.2 IM	8.0 FL	9.2 FL
	Pimaric Acid	7.2 FM	9.2 FL	2.4 IM	NO	170.4 FL	NO	5.8 IH	2.0 FL
PP2	Adsorbable Organic Halide	. .	. .	. .	. .	. .	105.1 FH	. .	. .

LEGEND

FH - frequently found (high level)
FL - frequently found (low level)
FM - frequently found (medium level)
IH - infrequently found (high level)
IL - infrequently found (low level)
IM - infrequently found (medium level)
NO - nonoccurrence

APPENDIX N

Average Process Effluent Travelling Blank Concentration Divided by the Regulation Method Detection Limit by Subcategory

Table 9.1

AVERAGE PROCESS EFFLUENT TRAVELLING BLANK CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS FOR MILLS IN THE SULPHATE (KRAFT) SUBCATEGORY

ATG	PARAMETER	Boise (Ft.F)	CP (Dryden)	CP (T.Bay)	Domtar (Cwl)	Domtar (RR)	Eddy (Esp)	James River	KC (Terr.B)	Malette
9	Aluminum	.9	.9	.9	1.0	1.0	.4	1.0	1.0	.3
	Chromium	.1	.	.1	1.0	1.0	.2	1.0	1.0	.1
	Copper	.5	.8	.5	1.0	1.0	.4	1.0	1.0	.3
	Molybdenum	.1	.7	.1	1.0	1.0	.3	1.0	1.0	.3
	Nickel	.4	.8	.4	.5	.5	.2	1.0	.5	.2
	Thallium	.5	.6	.5	1.0	1.0	.8	1.0	1.0	.7
	Vanadium	.1	.7	.1	.7	.7	.1	1.0	.7	.1
	Zinc	.2	.7	.6	1.0	1.0	.5	1.0	1.0	.3
12	Mercury	.2	.2	.2	1.0	1.0	.6	1.0	1.0	.6
15	Sulphide	.6	.6	.6	.	.	.	.	.	.
16	1,2-Dichloroethane	.8	.6	.6	.2	.2	.7	.5	.2	.6
	Bromodichloromethane	1.2	1.2	1.2	.2	.2	.5	.5	.2	.5
	Chloroform	14.8	.9	.9	.3	.3	.8	.5	.3	.8
	Methylene chloride	8.0	1.0	1.0	.6	.8	1.0	.3	.8	3.0
17	Benzene	.9	.7	.7	.2	.2	1.5	.4	.2	.6
	Styrene	.8	.5	.5	.4	.4	.5	.8	.4	.5
	Toluene	1.0	.9	.9	.4	.4	.5	6.4	.4	.7
19	Acenaphthylene	.1	.1	.1	.7	.7	.1	.3	.7	.1
	Benzo(g,h,i)perylene	2.4	2.4	2.4	.7	.7	1.0	1.0	.7	1.0
	Benzo(k)fluoranthene	1.1	1.1	1.1	.7	.7	.8	1.0	.7	.8
	Camphene	.1	.1	.1	.6	.6	.1	.1	.6	.1
	Chrysene	.7	.7	.7	1.0	1.0	.9	1.0	1.0	.9
	Dibenz(a,h)anthracene	1.1	1.1	1.1	.8	.8	1.0	.2	.8	1.0
	Fluoranthene	.5	.5	.5	1.0	1.0	.3	1.0	1.0	.3
	Naphthalene	.2	.2	.2	.9	.6	.1	.4	.6	.1
	Phenanthrene	1.0	1.0	1.0	1.0	1.0	.5	1.0	1.0	.5
	Pyrene	.7	.7	.7	1.1	1.0	.6	1.0	1.0	.6
20	2,3,5-Trichlorophenol	.3	.3	.3	.8	.8	.1	.3	.8	.1
	2,4,6-Trichlorophenol	.3	.3	.3	.8	.8	.1	.2	.8	.1
	2,4-Dichlorophenol	.2	.2	.2	.6	.6	.6	.1	.6	.6
	Phenol	.1	.1	.1	.4	.4	.2	.1	.4	.2
	m-Cresol	.1	.1	.1	.3	.3	.1	.9	.3	.1
	o-Cresol	.1	.1	.1	.3	.3	.2	.2	.3	.2
	p-Cresol	.1	.1	.1	.3	.3	.1	.1	.3	.1
23	1,2,3,4-Tetrachlorobenzene	1.0	1.0	1.0	.5	.5	.1	.9	.5	.1
	1,2,3,5-Tetrachlorobenzene	1.0	1.0	1.0	.5	.5	.2	.5	.5	.2
	1,2,3-Trichlorobenzene	1.0	1.0	1.0	.5	.5	.3	.8	.5	.3
	1,2,4,5-Tetrachlorobenzene	1.0	1.0	1.0	.5	.5	.1	.5	.5	.1
	1,2,4-Trichlorobenzene	1.0	1.0	1.0	.5	.5	.2	.6	.5	.2
	2,4,5-Trichlorotoluene	1.0	1.2	1.0	.5	.5	.1	.2	.5	.1
	Hexachlorobenzene	1.0	1.0	1.0	.5	.5	.4	.3	.5	.4
	Hexachlorobutadiene	1.0	1.0	1.0	.5	.5	.2	.2	.5	.2
	Hexachlorocyclopentadiene	1.0	1.0	1.0	1.0	1.0	.4	.4	1.0	.4
	Hexachloroethane	1.0	1.0	1.0	.5	.5	.2	.1	.5	.2
	Octachlorostyrene	1.0	1.0	1.0	.5	.5	.1	.2	.5	.1
	Pentachlorobenzene	1.0	1.0	1.0	.5	.5	.1	.2	.5	.1
24	2,3,7,8 TCDD	.6	.6	.6	.6	1.0	.6	.3	1.5	.5
	Octachlorodibenzo-p-dioxin	.7	.7	.7	.9	1.0	.7	5.0	1.9	.7
	Octachlorodibenzofuran	.7	.7	.7	.9	1.0	.7	.5	1.5	.6
	Total H6CDD	.7	.7	.7	.7	1.0	.7	.2	1.5	.7
	Total H6CDF	.8	.8	.8	.6	1.0	.8	.4	1.0	.9
	Total H7CDD	.6	.6	.6	.7	1.0	.6	.5	.8	.6
	Total H7CDF	.7	.7	.7	.9	1.0	.7	.4	1.2	.7
	Total PCDD	1.0	1.0	1.0	.4	1.0	1.0	.4	2.0	1.0

Table 9.1 (cont'd)

AVERAGE PROCESS EFFLUENT TRAVELLING BLANK CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS FOR MILLS IN THE SULPHATE (KRAFT) SUBCATEGORY

ATG	PARAMETER	Boise (Ft.F)	CP (Dryden)	CP (T.Bay)	Domtar (Cwl)	Domtar (RR)	Eddy (Esp)	James River	KC (Terr.B)	Malette
24	Total PCDF	.9	.9	.9	.8	1.0	.9	.5	1.2	.9
	Total TCDD	.6	.6	.6	.6	1.0	.6	.3	1.5	.6
	Total TCDF	.5	.5	.5	.6	1.0	.5	.6	1.2	.7
26	Abietic Acid	2.8	1.0	1.0	.8	1.0	.6	.4	1.0	.6
	Chlorodehydroabietic Acid	9.0	1.0	4.4	1.0	1.0	.8	.8	1.0	1.4
	Dehydroabietic Acid	2.0	1.0	2.2	1.0	1.0	1.8	.4	1.0	1.0
	Isopimaric Acid	1.2	1.0	1.0	1.0	1.0	.8	.2	1.0	.8
	Levopimaric Acid	1.0	1.0	1.0	1.0	1.0	.8	.6	1.0	.8
	Neoabietic Acid	1.6	1.0	1.0	1.0	1.0	.6	.6	1.0	.6
	Oleic Acid	1.6	1.0	2.0	1.0	1.0	.6	3.0	1.0	.6
	Pimaric Acid	1.6	1.0	1.0	1.0	1.0	.6	.2	1.0	.6
PP2	Adsorbable Organic Halide	.1	.1	.1	.4	.4	.1	29.6	.4	.
PP3	Dichlorodehydroabietic Ac.	1.4	1.0	1.4	1.0	1.0	.8	.6	1.0	.8

Table 9.2

AVERAGE PROCESS EFFLUENT TRAVELLING BLANK CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS FOR MILLS IN THE SULPHITE-MECHANICAL SUBCATEGORY

ATG	PARAMETER	AP (I.Falls)	AP (Ft.Wil) 0100	AP (Ft.Wil) 0200	AP (Prov.P)	AP (T.Bay)	Boise (Ken)	Q&O	St. Marys	Spruce Falls
4a	Ammonia plus Ammonium	.	.	.	.	.	.1	.	.	.
	Total Kjeldahl nitrogen	.	.	.	.	.	1.0	.	.	.
4b	Nitrate+Nitrite	.	.	.	.	.	.2	.	.	.
6	Total phosphorus	.	.	.	.	.	.9	.	.	.
9	Aluminum	.3	.3	.3	.3	.7	.9	.4	.3	1.0
	Copper	.3	.3	.3	.3	.3	.5	.3	.3	2.0
	Zinc	.3	.3	.3	.3	.3	.3	.3	.3	6.0
16	1,2-Dichloroethane	.8	.6	1.0	.8	.8	.6	1.0	.8	.2
	Bromodichloromethane	.5	.5	.5	.5	.5	1.2	.5	.5	.2
	Chloroform	3.5	.8	.8	1.4	.8	.9	.8	.8	.3
	Chloromethane	.2	.2	.2	.8	.2	.5	.2	.2	.5
	Methylene chloride	.7	.7	.7	.6	104.2	1.0	.7	1.4	.8
17	Benzene	.4	.4	.4	.4	.4	.7	.4	.5	.2
	Styrene	.5	.5	.5	.5	.5	.5	.5	.5	.4
	Toluene	.5	.5	.5	.5	.5	.9	.5	.5	.4
	o-Xylene	.4	.4	.4	.4	.4	.5	.4	.4	.4
19	Benzo(g,h,i)perylene	1.0	1.0	1.0	1.0	1.0	2.4	.	1.0	.7
	Benzo(k)fluoranthene	.8	.8	.8	.8	.8	1.1	.	.8	.7
	Camphene	.1	.1	.1	.1	.1	.1	.	.1	.6
	Dibenz(a,h)anthracene	1.0	1.0	1.0	1.0	1.0	1.1	.	1.0	.8
20	Phenol	.2	.2	.2	.2	.2	.1	.2	.2	.4
	m-Cresol	.1	.1	.1	.1	.1	.1	.1	.1	.3
	p-Cresol	.1	.1	.1	.1	.1	.1	.1	.1	.3
23	1,2,3-Trichlorobenzene	.3	.3	.3	.3	.3	1.0	.	.3	.5
	1,2,4-Trichlorobenzene	.2	.2	.2	.2	.2	1.0	.	.2	.5
	2,4,5-Trichlorotoluene	.1	.1	.1	.1	.1	1.0	.	.1	.5
	Pentachlorobenzene	.1	.1	.1	.1	.1	1.0	.	.1	.5
24	Octachlorodibenzo-p-dioxin	.	.7	.7	.7	.7	.7	.	.7	1.7
	Octachlorodibenzofuran	.	.7	.7	.7	.7	.7	.	.7	1.0
26	Abietic Acid	.6	.6	.	.6	.6	4.4	.6	.6	1.2
	Chlorodehydroabietic Acid	.8	.8	.	.8	21.4	1.8	.8	.8	1.0
	Dehydroabietic Acid	1.8	1.6	.6	3.0	1.8	1.0	.6	4.6	1.6
	Isopimaric Acid	.8	.8	.	.8	.8	1.0	.8	1.4	1.0
	Levopimaric Acid	.8	3.4	.	.8	.8	1.0	.8	.8	1.0
	Neoabietic Acid	.6	10.6	.	4.6	.6	1.0	.6	.6	1.0
	Oleic Acid	.6	3.8	.	.6	.6	1.0	.6	.6	1.4
	Pimaric Acid	.6	.6	.	.6	1.4	1.0	.6	.6	1.0

Table 9.3

AVERAGE PROCESS EFFLUENT TRAVELLING BLANK CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS FOR MILLS IN THE CORRUGATING SUBCATEGORY

ATG	PARAMETER	Oomtar (Trenton)	Macmillan Bloedel	
			1200	1300
4a	Ammonia plus Ammonium	.	1.5	1.2
	Total Kjeldahl nitrogen	.	7.1	5.1
4b	Nitrate+Nitrite	.	.4	.3
6	Total phosphorus	.	.5	.5
9	Aluminum	1.0	5.7	5.3
	Cadmium	1.0	5.0	3.5
	Chromium	1.0	.9	1.4
	Cobalt	1.0	.5	.5
	Copper	1.0	6.0	6.4
	Lead	1.0	.7	.6
	Molybdenum	1.0	.5	.5
	Nickel	.5	.5	.5
	Thallium	1.0	.7	.9
	Vanadium	.7	2.5	1.9
	Zinc	1.0	1.0	22.6
16	Chloroform	.3	.6	.6
20	Phenol	.4	.4	.4
	o-Cresol	.3	.6	.6
26	Abietic Acid	1.0	1.0	1.0
	Chlorodehydroabietic Acid	1.0	1.0	1.0
	Dehydroabietic Acid	1.0	9.6	1.0
	Isopimaric Acid	1.0	.6	1.0
	Levopimaric Acid	1.0	1.0	1.0
	Neoabietic Acid	1.0	1.0	1.0
	Oleic Acid	3.0	1.0	1.0
	Pimaric Acid	1.0	1.0	1.0

Table 9.4

AVERAGE PROCESS EFFLUENT TRAVELLING BLANK CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS FOR MILLS IN THE DEINKING-BOARD-FINE PAPERS-TISSUE SUBCATEGORY

ATG	PARAMETER	Beaver Wood	Domtar (St.C)	Eddy (Ott)	KC (Hunts)	KC (St.C)	Noranda	Strath.	Trent Valley
1	COD	.	24.0	.	.	.	.	.	.
9	Aluminum	.4	.4	.4	1.0	.8	.4	.5	.3
	Chromium	.1	.3	.3	1.0	.1	.3	.1	.1
	Copper	3.9	.5	.5	1.0	.8	.5	1.0	.3
	Zinc	14.2	1.9	.7	1.0	.5	.8	4.2	.3
16	1,1-Dichloroethane	.2	.2	.2	.2	.1	.2	.2	.2
	1,1-Dichloroethylene	.1	.1	.1	.2	.1	.1	.1	.1
	1,2-Dichloroethane	.6	.8	.8	.2	.1	.8	.8	.8
	Bromodichloromethane	.5	.5	.5	.2	.7	.5	.5	.5
	Chloroform	.8	.8	.8	.3	.1	.8	.8	.8
	Dibromochloromethane	.2	.2	.2	.9	.1	.2	.2	.2
	Methylene chloride	.6	1.4	.7	1.3	.3	1.3	25.4	8.8
	Tetrachloroethylene	.2	.2	.2	.5	.1	.2	.2	.2
	Trichloroethylene	.5	.5	.5	.1	.1	.5	.5	.5
17	Benzene	.4	.4	.8	.2	.2	3.0	.4	.4
	Toluene	.7	.5	.5	.4	.1	.6	.5	.5
	m-Xylene and p-Xylene	.3	.2	.2	.2	.1	.2	.2	.2
	o-Xylene	.4	.4	.4	.4	.1	.4	.4	.4
19	2-Methylnaphthalene	.1	.1	.1	.9	.3	.1	.1	.1
	Naphthalene	.1	.1	.1	.6	.1	.1	.1	.1
20	Pentachlorophenol	.1	.1	.1	.8	.2	.1	.1	.1
	Phenol	.2	.2	.2	.4	.2	.2	.2	.2
	m-Cresol	.1	.1	.1	.3	.2	.1	.1	.1
	p-Cresol	.1	.1	.1	.3	.2	.1	.1	.1
23	1,2,3,4-Tetrachlorobenzene	.1	.1	.1	.5	.7	.1	.1	.1
	1,2,3-Trichlorobenzene	.3	.3	.3	.5	.7	.3	.3	.3
	1,2,4-Trichlorobenzene	.2	.4	.2	.5	.7	.7	.2	.2
	Hexachlorocyclopentadiene	.4	.4	.4	1.0	1.0	.4	.4	.4
24	Octachlorodibenzo-p-dioxin	.	1.1	.7	1.9	.	.7	.	.
	Total H6CDF	.	1.1	.8	1.0	.5	.8	.	.
	Total TCDF	.	.7	.5	1.0	.7	.5	.	.
26	Abietic Acid	.6	.6	.6	1.0	.6	.6	.6	.6
	Chlorodehydroabietic Acid	1.8	.8	.8	1.0	.6	.8	.8	1.6
	Dehydroabietic Acid	.6	2.8	.6	1.0	.6	3.0	.6	1.6
	Isopimaric Acid	4.6	.8	.8	1.0	.6	.8	2.2	1.4
	Levopimaric Acid	13.4	.8	.8	1.0	.6	8.0	.8	.8
	Neoabietic Acid	.6	.6	.6	1.0	.6	.6	.6	.6
	Oleic Acid	.6	2.8	.6	1.0	2.6	.6	.6	3.0
	Pimaric Acid	3.2	1.4	.6	1.0	.6	2.4	1.6	.6
PP1	BOD, 5 day, Total Demand	.	8.8	.	.	.	.	.	.

APPENDIX O

Absolute Value of the Average Difference Between Process Effluent Concentration and Duplicate Sample Concentration Divided by the Regulation Method Detection Limit by Subcategory

Table 10.1

ABSOLUTE VALUE OF THE AVERAGE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS FOR MILLS IN THE SULPHATE (KRAFT) SUBCATEGORY

ATG	PARAMETER	Boise (Ft.F)	CP (Dryden)	CP (T.Bay)	Domtar (Cwl)	Domtar (RR)	Eddy (Esp)	James River	KC (Terr.B)	Malette
1	COD	2.5	.3	4.3	1.5	.2	.	3.5	4.7	5.7
4a	Ammonia plus Ammonium	.0	1.5	.1	.4	.2	.1	1.4	.2	.1
	Total Kjeldahl nitrogen	3.8	.5	.9	.3	.3	.3	.4	.9	.2
4b	Nitrate+Nitrite	.1	1.1	.0	.6	.0	.1	.0	.1	.4
5a	DOC	.	.	.	.	.	10.6	.	.	.
6	Total phosphorus	.3	1.0	.2	.0	.1	.3	.2	.0	.0
7	Specific conductance	1.8	7.7	2.1	1.5	.2	1.5	16.4	2.0	1.5
8	Total suspended solids	.7	.4	1.4	.9	.3	.8	1.3	.4	.5
	VSS	.4	.2	.	.	.	.0	.	.0	.
9	Aluminum	1.2	1.3	8.0	2.9	.7	2.3	.6	.7	2.5
	Chromium	.0	.	.1	.0	.0	.2	.0	.0	.1
	Copper	.1	.1	.2	.0	.0	.0	.0	.0	.2
	Molybdenum	.0	.1	.0	.0	.0	.0	.0	.0	.0
	Nickel	.1	.1	.0	.0	.0	.1	.7	.0	.0
	Thallium	.2	.3	.1	.0	.0	.0	.0	.0	.0
	Vanadium	.0	.1	.0	.0	.0	.2	.0	.0	.0
	Zinc	.3	1.3	2.1	.1	.0	.8	.0	.4	1.1
12	Mercury	.0	.0	.3	.0	.0	.0	.0	.0	.4
15	Sulphide	.4	.4	1.1	2.0	5.7	11.4	6.0	.6	1.4
16	1,2-Dichloroethane	.0	.0	.0	.	.	.1	.0	.	.0
	Bromodichloromethane	.0	.0	.0	.	.	2.3	.0	.	.0
	Chloroform	91.6	11.3	342.8	16.1	14.3	10.8	85.0	1.1	145.3
	Methylene chloride	.0	.0	.0	.	.	2.2	.0	.	24.3
17	Benzene	.0	.0	.0	1.1	.	2.3	.0	.	2.8
	Styrene	.0	.0	.0	.6	.	.0	.0	.	55.6
	Toluene	3.1	.9	.3	1.4	.	.6	.0	.	2.0
19	Acenaphthylene	.0	.0	.0	.0	.0	.0	.0	.0	.0
	Benzo(g,h,i)perylene	.0	.0	.0	.0	.0	.0	.0	.0	.0
	Benzo(k)fluoranthene	.0	.0	.0	.0	.0	.0	.0	.0	.0
	Camphene	.3	.0	.0	.0	.0	.0	.8	.0	.8
	Chrysene	.0	.0	.0	.2	.0	.0	.0	.0	.0
	Dibenz(a,h)anthracene	.0	.0	.0	.0	.0	.0	.0	.0	.0
	Fluoranthene	.0	.0	.0	2.2	.0	.0	.0	.0	.0
	Naphthalene	.0	.0	.0	.2	.0	.0	.0	.0	.1
	Phenanthrene	.0	.0	.0	1.8	.0	.0	.0	.0	.0
	Pyrene	.0	.0	.0	1.5	.0	.0	.0	.0	.0
20	2,3,5-Trichlorophenol	.4	.7	.7	.0	.0	.0	.0	.0	.0
	2,4,6-Trichlorophenol	1.1	.6	.5	.0	.1	1.0	.0	.1	2.7
	2,4-Dichlorophenol	.7	.1	.4	.0	.0	.1	.0	.1	1.5
	Phenol	.0	.0	1.8	37.1	.1	.0	.3	.0	1.3
	m-Cresol	.4	.0	.7	.0	.0	.0	.0	.0	1.6
	o-Cresol	.4	.3	.1	.0	.0	.0	.0	.0	.1
	p-Cresol	.1	.0	.0	.0	.0	.0	.0	.0	.1
23	1,2,3,4-Tetrachlorobenzene	2.7	.5	2.3	.0	.0	.0	.0	.0	.0
	1,2,3,5-Tetrachlorobenzene	.0	12.9	143.9	.0	.0	.0	.0	.0	.0
	1,2,3-Trichlorobenzene	86.7	12.2	42.9	.0	.0	.0	.0	.0	.0
	1,2,4,5-Tetrachlorobenzene	3.9	1.3	3.4	.1	.1	.0	.0	1.3	.0
	1,2,4-Trichlorobenzene	.4	.2	68.3	.0	.4	.0	.8	.0	1.0
	2,4,5-Trichlorotoluene	73.2	36.1	6.5	.0	.0	.0	.0	.0	.4
	Hexachlorobenzene	4.7	1.3	16.8	.0	.0	.0	.0	.0	.0
	Hexachlorobutadiene	.3	.5	.7	.0	.0	.0	.0	.0	.0
	Hexachlorocyclopentadiene	4.8	.9	.4	.0	.0	.0	.7	.0	.6
	Hexachloroethane	.8	.1	.1	.0	.0	.0	.0	.0	.0

Table 10.1 (cont'd)

ABSOLUTE VALUE OF THE AVERAGE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS FOR MILLS IN THE SULPHATE (KRAFT) SUBCATEGORY

ATG	PARAMETER	Boise (Ft.F)	CP (Dryden)	CP (T.Bay)	Domtar (Cwl)	Domtar (RR)	Eddy (Esp)	James River	KC (Terr.B)	Malette
23	Octachlorostyrene	10.9	1.6	2.8	.0	.0	.0	.0	.0	.0
	Pentachlorobenzene	8.1	4.3	.0	.0	.0	.0	.0	.0	.0
24	2,3,7,8 TCDD	.1	.0	.0	.0	.0	.0	.0	.1	.0
	Octachlorodibenzo-p-dioxin	.1	.1	.4	1.6	.7	.0	6.3	.9	.6
	Octachlorodibenzofuran	.0	.1	.0	.0	.0	.0	1.1	.2	.0
	Total H6CDD	.1	.0	.0	.0	.0	.0	.1	.0	.0
	Total H6CDF	.0	.0	.0	.0	.0	.0	.1	.7	1.4
	Total H7CDD	.0	.0	.0	.0	.0	.0	3.4	.7	.5
	Total H7CDF	.0	.0	.0	.0	.0	.0	1.1	.2	1.6
	Total PCDD	.3	.0	.0	.0	.0	.0	.3	.0	.0
	Total PCDF	.0	.0	1.2	.0	.0	.8	.7	.2	.0
	Total TCDD	.1	.0	.0	.0	.0	.0	.8	1.6	.0
	Total TCDF	2.9	1.0	1.9	.0	.0	.9	.8	5.7	19.5
26	Abietic Acid	.7	2.1	17.2	6.3	29.9	.2	3.6	.3	79.0
	Chlorodehydroabietic Acid	1.3	2.1	11.2	1.6	.6	.7	4.5	.0	6.5
	Dehydroabietic Acid	6.7	2.1	49.0	9.5	24.9	2.1	1.6	.7	.
	Isopimaric Acid	1.2	2.0	39.9	.0	6.9	.8	.3	.0	113.2
	Levopimaric Acid	1.1	.2	2.8	.2	.	.1	3.0	.0	2.8
	Neoabietic Acid	.6	2.0	4.6	.7	61.7	.0	.4	.1	32.3
	Oleic Acid	.9	6.0	28.1	4.5	.7	.0	2.6	.1	47.4
	Pimaric Acid	.5	1.5	9.6	.1	1.2	.0	.8	.0	22.3
PP1	BOD, 5 day, Total Demand	1.6	.2	1.9	.9	.8	.0	2.9	.1	1.8
PP2	Adsorbable Organic Halide	10.0	15.7	7.5	3.5	1.0	7.6	48.4	9.2	.
PP3	Dichlorodehydroabietic Ac.	3.6	.9	3.3	.7	.1	.3	1.0	.1	.

Table 10.2

ABSOLUTE VALUE OF THE AVERAGE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS FOR MILLS IN THE SULPHITE-MECHANICAL SUBCATEGORY

ATG	PARAMETER	AP (I.Falls)	AP (Ft.Wil)		AP (Prov.P)	AP (T.Bay)	Boise (Ken)	Q&O	St. Marys	Spruce Falls
			0100	0200						
1	COD	.	.	.	.	.	1.6	.	1.8	11.7
4a	Ammonia plus Ammonium	.1	.1	.0	.0	.0	.1	.0	.0	.0
	Total Kjeldahl nitrogen	.3	.6	1.4	.1	.0	.8	.2	.4	.4
4b	Nitrate+Nitrite	.1	.0	.0	.0	.1	.0	.0	.0	.0
5a	DOC	47.3	17.1	33.3	8.2	46.7	.	2.3	.	.
6	Total phosphorus	.2	1.3	.4	.0	.3	.0	.0	1.7	.3
7	Specific conductance	1.1	1.5	39.6	1.0	2.8	3.3	1.2	3.2	.
8	Total suspended solids	1.0	.4	4.6	.3	.4	.8	.5	.8	.4
	VSS	.	.	.	.	.	.	.2	.	.
9	Aluminum	6.7	2.4	4.3	3.6	3.8	1.3	2.2	16.3	.8
	Copper	.2	.3	.	.2	.1	.1	.2	.0	.5
	Zinc	4.5	.4	1.0	.9	.7	.2	.7	.0	.0
16	1,2-Dichloroethane	.0	.0	.0	.0	.0	.0	.0	.1	.
	Bromodichloromethane	.0	1.4	.0	.0	.2	.0	.0	.0	.
	Chloroform	6.0	16.9	1.6	2.1	.6	.1	.0	.4	.1
	Chloromethane	1.6	.0	.0	.0	.2	.0	.0	1.1	.
	Methylene chloride	6.1	5.7	.0	4.7	148.1	.0	6.0	31.7	.
17	Benzene	7.7	3.6	.0	.4	2.9	.0	.6	1.4	.
	Styrene	.4	.2	.0	.3	.4	.0	.0	.1	.
	Toluene	19.6	.5	1.0	.1	1.0	.0	.4	3.3	.8
	o-Xylene	.1	.0	.0	.3	1.0	.0	.0	.1	.
19	Benzo(g,h,i)perylene	.0	.0	.0	.0	.0	.0	.0	.0	.0
	Benzo(k)fluoranthene	.0	.0	.0	.0	.0	.0	.0	.0	.0
	Camphene	.1	.1	.0	.0	.2	.5	.0	.0	.4
	Dibenz(a,h)anthracene	.0	.0	.0	.0	.0	.0	.0	.0	.0
20	Phenol	.5	.9	2.9	.0	.8	.6	.0	.1	.0
	m-Cresol	.3	.1	.2	.0	.2	.7	.0	.1	.0
	p-Cresol	.3	.2	.0	.0	.2	.6	.0	.3	.0
23	1,2,3-Trichlorobenzene	.0	.0	.0	.0	.0	5.7	.0	.0	.1
	1,2,4-Trichlorobenzene	.6	.0	.0	.0	.7	6.5	.1	.9	.0
	2,4,5-Trichlorotoluene	.0	.0	.0	.0	.0	28.4	.0	.0	.0
	Pentachlorobenzene	.1	.0	.0	.0	.0	.8	.0	.0	.0
24	Octachlorodibenzo-p-dioxin	.	.0	.1	.0	208.4	.4	.	1.3	1.2
	Octachlorodibenzofuran	.	.0	.0	.0	43.5	.0	.	.0	.0
26	Abietic Acid	142.5	189.7	.0	1.4	78.5	51.4	.0	34.0	13.8
	Chlorodehydroabietic Acid	.0	.7	.0	.0	.3	6.3	.8	.9	.3
	Dehydroabietic Acid	73.6	102.5	525.0	25.2	87.1	71.5	.7	82.0	43.1
	Isopimaric Acid	92.5	112.0	.0	3.3	29.8	79.9	1.4	20.0	6.1
	Levopimaric Acid	22.8	38.3	32.0	.9	11.1	56.3	.0	28.4	.
	Neoabietic Acid	24.8	21.7	.0	6.5	14.4	28.7	.0	18.1	19.4
	Oleic Acid	4.3	7.8	.0	3.5	4.6	29.0	7.1	.6	2.4
	Pimaric Acid	22.3	20.3	4.0	2.0	7.4	18.3	.0	7.1	2.7
PP1	BOD, 5 day, Total Demand	8.4	1.8	21.2	.7	2.8	6.9	.2	3.8	5.7

Table 10.3

ABSOLUTE VALUE OF THE AVERAGE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS FOR MILLS IN THE CORRUGATING SUBCATEGORY

		Domtar (Trenton)	Macmillan Bloedel	
ATG	PARAMETER		1200	1300
1	COD	4.6	.	.
4a	Ammonia plus Ammonium	.0	.4	1.1
	Total Kjeldahl nitrogen	1.3	.	17.9
4b	Nitrate+Nitrite	.1	132.9	47.6
5a	DOC	.	.	80.8
6	Total phosphorus	.2	.8	1.7
7	Specific conductance	1.4	25.5	5.8
8	Total suspended solids	1.8	9.8	7.0
	VSS	.	.	1.4
9	Aluminum	1.3	.4	.8
	Cadmium	.4	1.1	1.3
	Chromium	.0	1.3	.2
	Cobalt	.0	.1	.2
	Copper	.3	.2	.3
	Lead	.0	.5	.2
	Molybdenum	.0	.4	.4
	Nickel	.0	.5	1.1
	Thallium	.0	.6	1.0
	Vanadium	.0	1.3	.3
	Zinc	.0	1.0	1.3
16	Chloroform	1.9	.0	.0
20	Phenol	17.8	.0	.0
	o-Cresol	.1	.0	.1
26	Abietic Acid	7.7	1.0	6.2
	Chlorodehydroabietic Acid	.4	15.4	29.8
	Dehydroabietic Acid	24.4	7.0	6.0
	Isopimaric Acid	3.0	12.4	70.6
	Levopimaric Acid	.0	26.2	92.2
	Neoabietic Acid	23.9	13.7	9.3
	Oleic Acid	3.5	21.1	16.9
	Pimaric Acid	5.8	6.3	11.7
PP1	BOD, 5 day, Total Demand	17.6	.	15.8

Table 10.4

ABSOLUTE VALUE OF THE AVERAGE DIFFERENCE BETWEEN PROCESS EFFLUENT CONCENTRATION AND DUPLICATE SAMPLE CONCENTRATION DIVIDED BY THE REGULATION METHOD DETECTION LIMIT FOR CANDIDATE PARAMETERS FOR MILLS IN THE DEINKING-BOARD-FINE PAPERS-TISSUE SUBCATEGORY

ATG	PARAMETER	Beaver Wood	Domtar (St.C)	Eddy (Ott)	KC (Hunts)	KC (St.C)	Noranda	Strath.	Trent Valley
1	COD	.	10.2	2.0	.7	.3	.	2.3	2.2
4a	Ammonia plus Ammonium	.0	.0	.0	.0	.0	.0	.2	.0
	Total Kjeldahl nitrogen	.4	.1	.3	.2	.4	.4	1.0	.7
4b	Nitrate+Nitrite	.1	.1	.1	.0	.7	.3	.0	.0
5a	DOC	6.3	.	.	.	.	7.6	.	.
6	Total phosphorus	.1	.1	.4	.3	.3	.1	.2	.2
7	Specific conductance	.3	2.1	1.2	1.6	2.1	.7	.6	7.9
8	Total suspended solids	.8	.7	.2	.0	.2	.2	.5	1.0
	VSS	.	.	.	.	.	.1	.5	.
9	Aluminum	3.5	8.7	5.7	.3	.5	.4	.6	15.5
	Chromium	.0	.1	.0	.0	.2	.1	.1	.1
	Copper	.1	.5	.6	.0	.2	.0	.1	.3
	Zinc	.2	.5	.5	.0	.2	.6	.1	3.3
16	1,1-Dichloroethane	.0	.0	.0	.0	.1	.0	.0	13.9
	1,1-Dichloroethylene	1.5	.0	.2	.0	.0	.1	.0	10.9
	1,2-Dichloroethane	.1	.0	.0	.0	.0	.0	.0	.0
	Bromodichloromethane	.0	.1	.0	.0	.0	1.1	.0	.0
	Chloroform	.4	1.1	1.4	.4	.0	31.0	6.5	.5
	Dibromochloromethane	.0	.0	.0	.0	.0	.1	.0	.0
	Methylene chloride	3.2	9.6	.1	.4	.3	.0	38.6	.9
	Tetrachloroethylene	.0	.2	.1	.0	.2	.1	.0	.0
	Trichloroethylene	.0	.0	.0	.0	.1	.0	.0	.0
17	Benzene	1.1	.7	2.6	.0	.0	.5	.2	.7
	Toluene	4.9	.5	.0	.0	.2	.1	.6	1.4
	m-Xylene and p-Xylene	1.1	.3	.3	.0	.1	.2	.0	.0
	o-Xylene	.6	.1	.2	.0	.0	.2	.0	.0
19	2-Methylnaphthalene	.0	.0	.0	.0	.	.0	.0	.0
	Naphthalene	.1	.0	.9	.0	.6	.0	.0	.2
20	Pentachlorophenol	.0	.0	.0	.0	.0	.0	.2	.2
	Phenol	.9	.2	.1	.0	.8	.4	3.1	11.9
	m-Cresol	.1	.0	.1	.0	.0	.2	.6	2.2
	p-Cresol	.0	.0	.0	.0	.2	.0	7.1	.5
23	1,2,3,4-Tetrachlorobenzene	.0	.0	.5	.0	.0	.0	.0	.0
	1,2,3-Trichlorobenzene	.0	.0	.1	.0	.1	.0	.0	.0
	1,2,4-Trichlorobenzene	.1	.9	1.3	.0	.1	.2	.0	.2
	Hexachlorocyclopentadiene	.0	.0	.5	.0	.7	17.1	.0	.0
24	Octachlorodibenzo-p-dioxin	.	.	.0	32.3	.	2.2	.	.
	Total H6CDF	.	.0	.0	.0	.0	.0	.	.
	Total TCDF	.	.0	.0	.0	.6	.0	.	.
26	Abietic Acid	29.6	8.8	9.7	.0	.3	.0	.0	4.0
	Chlorodehydroabietic Acid	.4	.2	.0	.0	.1	.0	3.0	2.4
	Dehydroabietic Acid	46.0	34.5	54.4	.2	51.0	.	10.8	50.8
	Isopimaric Acid	16.1	2.7	1.1	.0	50.1	.0	8.0	6.0
	Levopimaric Acid	5.6	.9	5.2	.0	.0	.0	6.6	8.1
	Neoabietic Acid	2.8	.0	.6	.0	.0	.0	4.4	.0
	Oleic Acid	18.7	1.3	.0	.9	550.4	.8	11.1	5.6
	Pimaric Acid	3.2	.4	1.7	.0	.1	.0	9.6	2.4
PP1	BOD, 5 day, Total Demand	1.0	1.2	1.6	.1	.6	7.3	1.6	3.1

GLOSSARY

Corrected data:	Data that have been corrected for laboratory method blank analyses.
Duplicate sample:	One of two samples collected at a sampling point at the same time in a manner that minimizes differences between the samples.[3]
Method blank sample:	A sample of water that is free both of the parameters for which the sample is to be analyzed and of any substance that might interfere with that analysis.
Replicate sample:	One of at least two samples removed from a single sample container in a manner that minimizes differences between the samples.
Travelling blank:	A sample of uncontaminated water that accompanies the container intended for the other sample to the area in which the other sample is to be collected. The sample of water is opened and resealed in that area and is returned to the laboratory together with the other effluent sample.
Travelling spiked blank:	A sample of uncontaminated water to which a standard solution has been added. The sample with this solution accompanies the container intended for the other sample to the area in which the other sample is to be collected. The sample spiked with solution is left unopened and is returned to the laboratory together with the other effluent sample.
Uncorrected data:	Data that have not been corrected for laboratory method blank analyses.

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[3] For the purposes of the Pulp and Paper Sector Effluent Monitoring Regulation a replicate or duplicate sample could be used for either replicate or duplicate analyses.